

Arg Thr Val Ala Ile Ile Gly Gly Phe Leu Val Leu Ala Ser Gly Ala  
130 135 140

Gly Glu Leu Tyr Arg Arg Lys Pro Arg Ser Arg Ser Leu Gln Ser Thr  
145 150 155 160

Gly Gln Val Phe Leu Gly Ile Tyr Leu Ile Cys Val Ala Tyr Ser Leu  
165 170 175

Gln His Ser Lys Glu Asp Arg Leu Ala Tyr Leu Asn His Leu Pro Gly  
180 185 190

Gly Glu Leu Met Ile Gln Leu Phe Phe Val Leu Tyr Gly Ile Leu Ala  
195 200 205

Leu Ala Phe Leu Ser Gly Tyr Tyr Val Thr Leu Ala Ala Gln Ile Leu  
210 215 220

Ala Val Leu Leu Pro Pro Val Met Leu Leu Ile Asp Gly Asn Val Ala  
225 230 235 240

Tyr Trp His Asn Thr Arg Arg Val Glu Phe Trp Asn Gln Met Lys Leu  
245 250 255

Leu Gly Glu Ser Val Gly Ile Phe Gly Thr Ala Val Ile Leu Ala Thr  
260 265 270

Asp Gly

<210> 272

<211> 203

<212> PRT

<213> Homo sapiens

<400> 272

Met Gln Leu Gly Ser Val Leu Leu Thr Arg Cys Pro Phe Trp Gly Cys  
1 5 10 15

Phe Ser Gln Leu Met Leu Tyr Ala Glu Arg Ala Glu Ala Arg Arg Lys  
20 25 30

Pro Asp Ile Pro Val Pro Tyr Leu Tyr Phe Asp Met Gly Ala Ala Val  
35 40 45

Leu Cys Ala Ser Phe Met Ser Phe Gly Val Lys Arg Arg Trp Phe Ala  
50 55 60

Leu Gly Ala Ala Leu Gln Leu Ala Ile Ser Thr Tyr Ala Ala Tyr Ile  
65 70 75 80

Gly Gly Tyr Val His Tyr Gly Asp Trp Leu Lys Val Arg Met Tyr Ser  
85 90 95

Arg Thr Val Ala Ile Ile Gly Gly Phe Leu Val Leu Ala Ser Gly Ala  
100 105 110

Gly Glu Leu Tyr Arg Arg Lys Pro Arg Ser Arg Ser Leu Gln Ser Thr

115                      120                      125  
 Gly Gln Val Phe Leu Gly Ile Tyr Leu Ile Cys Val Ala Tyr Ser Leu  
 130                      135                      140  
 Gln His Ser Lys Glu Asp Arg Leu Ala Tyr Leu Asn His Leu Pro Gly  
 145                      150                      155                      160  
 Gly Glu Leu Met Ile Gln Leu Phe Phe Val Leu Tyr Gly Ile Leu Ala  
 165                      170                      175  
 Pro Gly Leu Ser Val Arg Leu Leu Arg Asp Pro Arg Cys Pro Asp Pro  
 180                      185                      190  
 Gly Cys Thr Ala Ala Pro Cys His Ala Ala His  
 195                      200  
  
 <210> 273  
 <211> 407  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 273  
 Ser Asn Glu Ile Leu Leu Ser Phe Pro Gln Asn Tyr Tyr Ile Gln Trp  
 1                      5                      10                      15  
 Leu Asn Gly Ser Leu Ile His Gly Leu Trp Asn Leu Ala Ser Leu Phe  
 20                      25                      30  
 Ser Asn Leu Cys Leu Phe Val Leu Met Pro Phe Ala Phe Phe Phe Leu  
 35                      40                      45  
 Glu Ser Glu Gly Phe Ala Gly Leu Lys Lys Gly Ile Arg Ala Arg Ile  
 50                      55                      60  
 Leu Glu Thr Leu Val Met Leu Leu Leu Leu Ala Leu Leu Ile Leu Gly  
 65                      70                      75                      80  
 Ile Val Trp Val Ala Ser Ala Leu Ile Asp Asn Asp Ala Ala Ser Met  
 85                      90                      95  
 Glu Ser Leu Tyr Asp Leu Trp Glu Phe Tyr Leu Pro Tyr Leu Tyr Ser  
 100                      105                      110  
 Cys Ile Ser Leu Met Gly Cys Leu Leu Leu Leu Cys Thr Pro Val  
 115                      120                      125  
 Gly Leu Ser Arg Met Phe Thr Val Met Gly His Leu Leu Val Lys Pro  
 130                      135                      140  
 Thr Ile Leu Glu Asp Leu Asp Glu Gln Ile Tyr Ile Ile Thr Leu Glu  
 145                      150                      155                      160  
 Glu Glu Ala Leu Gln Arg Arg Leu Asn Gly Leu Ser Ser Ser Val Glu  
 165                      170                      175  
 Tyr Asn Ile Met Glu Leu Glu Gln Glu Leu Glu Asn Val Lys Thr Leu  
 180                      185                      190

Lys Thr Lys Leu Glu Arg Arg Lys Lys Ala Ser Ala Trp Glu Arg Asn  
 195 200 205  
 Leu Val Tyr Pro Ala Val Met Val Leu Leu Leu Ile Glu Thr Ser Ile  
 210 215 220  
 Ser Val Leu Leu Val Ala Cys Asn Ile Leu Cys Leu Leu Val Asp Glu  
 225 230 235 240  
 Thr Ala Met Pro Lys Gly Thr Arg Gly Pro Gly Ile Gly Asn Ala Ser  
 245 250 255  
 Leu Ser Thr Phe Gly Phe Val Gly Ala Ala Leu Glu Ile Ile Leu Ile  
 260 265 270  
 Phe Tyr Leu Met Val Ser Ser Val Val Gly Phe Tyr Ser Leu Arg Phe  
 275 280 285  
 Phe Gly Asn Phe Thr Pro Lys Lys Asp Asp Thr Thr Met Thr Lys Ile  
 290 295 300  
 Ile Gly Asn Cys Val Ser Ile Leu Val Leu Ser Ser Ala Leu Pro Val  
 305 310 315 320  
 Met Ser Arg Thr Leu Gly Ile Thr Arg Phe Asp Leu Leu Gly Asp Phe  
 325 330 335  
 Gly Arg Phe Asn Trp Leu Gly Asn Phe Tyr Ile Val Leu Ser Tyr Asn  
 340 345 350  
 Leu Leu Phe Ala Ile Val Thr Thr Leu Cys Leu Val Arg Lys Phe Thr  
 355 360 365  
 Ser Ala Val Arg Glu Glu Leu Phe Lys Ala Leu Gly Leu His Lys Leu  
 370 375 380  
 His Leu Pro Asn Thr Ser Arg Asp Ser Glu Thr Ala Lys Pro Ser Val  
 385 390 395 400  
 Asn Gly His Gln Lys Ala Leu  
 405

&lt;210&gt; 274

&lt;211&gt; 165

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 274

Arg Ser Tyr Met Gln Ser Val Trp Thr Glu Glu Ser Gln Cys Thr Leu  
 1 5 10 15  
 Leu Asn Ala Ser Ile Thr Glu Thr Phe Asn Cys Ser Phe Ser Cys Gly  
 20 25 30  
 Pro Asp Cys Trp Lys Leu Ser Gln Tyr Pro Cys Leu Gln Val Tyr Val  
 35 40 45

Asn Leu Thr Ser Ser Gly Glu Lys Leu Leu Leu Tyr His Thr Glu Glu  
 50 55 60  
 Thr Ile Lys Ile Asn Gln Lys Cys Ser Tyr Ile Pro Lys Cys Gly Lys  
 65 70 75 80  
 Asn Phe Glu Glu Ser Met Ser Leu Val Asn Val Val Met Glu Asn Phe  
 85 90 95  
 Arg Lys Tyr Gln His Phe Ser Cys Tyr Ser Asp Pro Glu Gly Asn Gln  
 100 105 110  
 Lys Ser Val Ile Leu Thr Lys Leu Tyr Ser Ser Asn Val Leu Phe His  
 115 120 125  
 Ser Leu Phe Trp Pro Thr Cys Met Met Ala Gly Gly Val Ala Ile Val  
 130 135 140  
 Ala Met Val Lys Leu Thr Gln Tyr Leu Ser Leu Leu Cys Glu Arg Ile  
 145 150 155 160  
 Gln Arg Ile Asn Arg  
 165

<210> 275  
 <211> 155  
 <212> PRT  
 <213> Homo sapiens

<400> 275  
 Ala Phe Ala His Leu Gln Leu Gly Pro Met Trp Lys Leu Trp Arg Ala  
 1 5 10 15  
 Glu Glu Gly Ala Ala Ala Leu Gly Gly Ala Leu Phe Leu Leu Phe  
 20 25 30  
 Ala Leu Gly Val Arg Gln Leu Leu Lys Gln Arg Arg Pro Met Gly Phe  
 35 40 45  
 Pro Pro Gly Pro Pro Gly Leu Pro Phe Ile Gly Asn Ile Tyr Ser Leu  
 50 55 60  
 Ala Ala Ser Ser Glu Leu Pro His Val Tyr Met Arg Lys Gln Ser Gln  
 65 70 75 80  
 Val Tyr Gly Glu Val Gln Pro Arg Arg Ala Pro Gly Arg Glu Gly Arg  
 85 90 95  
 Gln Ala Gly Pro Gly Trp Pro Gly Pro Ser Trp Leu Asp Leu Trp Pro  
 100 105 110  
 Pro Leu Gly Arg Leu Val Gly Thr Ser Pro Cys Ala Gly Cys Pro Leu  
 115 120 125  
 Arg Asp Thr Arg Phe Pro Gly Leu Glu Gly Arg Ser Pro Arg Arg Arg  
 130 135 140  
 Ala Pro Leu Gln Gly Glu Pro Arg Pro Cys Arg

145

150

155

&lt;210&gt; 276

&lt;211&gt; 42

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 276

Met Arg Val Arg Ile Gly Leu Thr Leu Leu Leu Cys Ala Val Leu Leu  
 1 5 10 15

Ser Leu Ala Ser Ala Ser Ser Asp Glu Gly Ser Gln Asp Glu Ser  
 20 25 30

Leu Gly Phe Gln Asp Tyr Phe Asp Ile Arg  
 35 40

&lt;210&gt; 277

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 277

Met Ala Arg Gly Ser Leu Arg Arg Leu Leu Arg Leu Leu Val Leu Gly  
 1 5 10 15

Leu Trp Leu Ala Leu Leu Arg Ser Val Ala Gly Glu Gln Ala Pro Gly  
 20 25 30

Thr Ala Pro Cys Ser Arg Gly Ser Ser Trp Ser Ala Asp Leu Asp Lys  
 35 40 45

Cys Met Asp Cys Ser Thr Ser Cys Pro Leu Pro Ala Ala Leu Ala His  
 50 55 60

Pro Trp Gly Arg Ser Glu Pro Asp Leu Arg Ala Gly Ala Ala Phe Trp  
 65 70 75 80

Leu Phe Gly Leu Glu Thr Met Pro Gln Glu Arg Glu Val His His Pro  
 85 90 95

His Arg Gly Asp Arg Arg Arg Gly Leu Pro Ser Cys Gly Ala Asp Pro  
 100 105 110

Val Thr Met Cys Pro Leu Pro Ala Gly Ala Arg Pro Leu Ile Ile His  
 115 120 125

Ser Ser Ile Leu Glu Pro Val Ser Ala Ser Gln Thr Arg Arg Glu Pro  
 130 135 140

Ser Ser Ser Asn His Lys Gly Gly Gly Gly Arg  
 145 150 155

&lt;210&gt; 278

&lt;211&gt; 207

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 278

Gly Thr Ser Phe Leu Asp Pro Thr Leu Ser Leu Phe Val Leu Glu Lys  
 1 5 10 15  
 Phe Asn Leu Pro Ala Gly Tyr Val Gly Leu Val Phe Leu Gly Met Ala  
 20 25 30  
 Leu Ser Tyr Ala Ile Ser Ser Pro Leu Phe Gly Leu Leu Ser Asp Lys  
 35 40 45  
 Arg Pro Pro Leu Arg Lys Trp Leu Leu Val Phe Gly Asn Leu Ile Thr  
 50 55 60  
 Ala Gly Cys Tyr Met Leu Leu Gly Pro Val Pro Ile Leu His Ile Lys  
 65 70 75 80  
 Ser Gln Leu Trp Leu Leu Val Leu Ile Leu Val Val Ser Gly Leu Ser  
 85 90 95  
 Ala Gly Met Ser Ile Ile Pro Thr Phe Pro Glu Ile Leu Ser Cys Ala  
 100 105 110  
 His Glu Asn Gly Phe Glu Glu Gly Leu Ser Thr Leu Gly Leu Val Ser  
 115 120 125  
 Gly Leu Phe Ser Ala Met Trp Ser Ile Gly Ala Phe Met Gly Pro Thr  
 130 135 140  
 Leu Gly Gly Phe Leu Tyr Glu Lys Ile Gly Phe Glu Trp Ala Ala Ala  
 145 150 155 160  
 Ile Gln Gly Leu Trp Ala Leu Ile Ser Gly Leu Ala Met Gly Leu Phe  
 165 170 175  
 Tyr Leu Leu Glu Tyr Ser Arg Arg Lys Arg Ser Lys Ser Gln Asn Ile  
 180 185 190  
 Leu Ser Thr Glu Glu Glu Arg Thr Thr Leu Leu Pro Asn Glu Thr  
 195 200 205

&lt;210&gt; 279

&lt;211&gt; 85

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 279

Gly Thr Arg Glu Ala Arg Leu Arg Asp Leu Thr Arg Phe Tyr Asp Lys  
 1 5 10 15  
 Val Leu Ser Leu His Glu Asp Ser Thr Thr Pro Val Ala Asn Pro Leu  
 20 25 30  
 Leu Ala Phe Thr Leu Ile Lys Arg Leu Gln Ser Asp Trp Arg Asn Val  
 35 40 45  
 Val His Ser Leu Glu Ala Ser Glu Asn Ile Arg Ala Leu Lys Asp Gly

50

55

60

Tyr Glu Lys Val Glu Gln Asp Leu Pro Ala Phe Glu Asp Leu Glu Gly  
 65 70 75 80

Ala Ala Arg Ala Leu  
 85

&lt;210&gt; 280

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 280

Ala Leu Met Arg Leu Gln Asp  
 1 5

&lt;210&gt; 281

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 281

Val Glu Ala Gly Gly Ala Thr  
 1 5

&lt;210&gt; 282

&lt;211&gt; 489

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 282

Gly Thr Arg Glu Ala Arg Leu Arg Asp Leu Thr Arg Phe Tyr Asp Lys  
 1 5 10 15

Val Leu Ser Leu His Glu Asp Ser Thr Thr Pro Val Ala Asn Pro Leu  
 20 25 30

Leu Ala Phe Thr Leu Ile Lys Arg Leu Gln Ser Asp Trp Arg Asn Val  
 35 40 45

Val His Ser Leu Glu Ala Ser Glu Asn Ile Arg Ala Leu Lys Asp Gly  
 50 55 60

Tyr Glu Lys Val Glu Gln Asp Leu Pro Ala Phe Glu Asp Leu Glu Gly  
 65 70 75 80

Ala Ala Arg Ala Leu Met Arg Leu Gln Asp Val Tyr Met Leu Asn Val  
 85 90 95

Lys Gly Leu Ala Arg Gly Val Phe Gln Arg Val Thr Gly Ser Ala Ile  
 100 105 110

Thr Asp Leu Tyr Ser Pro Lys Arg Leu Phe Ser Leu Thr Gly Asp Asp  
 115 120 125

Cys Phe Gln Val Gly Lys Val Ala Tyr Asp Met Gly Asp Tyr Tyr His  
 130 135 140  
 Ala Ile Pro Trp Leu Glu Glu Ala Val Ser Leu Phe Arg Gly Ser Tyr  
 145 150 155 160  
 Gly Glu Trp Lys Thr Glu Asp Glu Ala Ser Leu Glu Asp Ala Leu Asp  
 165 170 175  
 His Leu Ala Phe Ala Tyr Phe Arg Ala Gly Asn Val Ser Cys Ala Leu  
 180 185 190  
 Ser Leu Ser Arg Glu Phe Leu Leu Tyr Ser Pro Asp Asn Lys Arg Met  
 195 200 205  
 Ala Arg Asn Val Leu Lys Tyr Glu Arg Leu Leu Ala Glu Ser Pro Asn  
 210 215 220  
 His Val Val Ala Glu Ala Val Ile Gln Arg Pro Asn Ile Pro His Leu  
 225 230 235 240  
 Gln Thr Arg Asp Thr Tyr Glu Gly Leu Cys Gln Thr Leu Gly Ser Gln  
 245 250 255  
 Pro Thr Leu Tyr Gln Ile Pro Ser Leu Tyr Cys Ser Tyr Glu Thr Asn  
 260 265 270  
 Ser Asn Ala Tyr Leu Leu Leu Gln Pro Ile Arg Lys Glu Val Ile His  
 275 280 285  
 Leu Glu Pro Tyr Ile Ala Leu Tyr His Asp Phe Val Ser Asp Ser Glu  
 290 295 300  
 Ala Gln Lys Ile Arg Glu Leu Ala Glu Pro Trp Leu Gln Arg Ser Val  
 305 310 315 320  
 Val Ala Ser Gly Glu Lys Gln Leu Gln Val Glu Tyr Arg Ile Ser Lys  
 325 330 335  
 Ser Ala Trp Leu Lys Asp Thr Val Asp Leu Lys Leu Val Thr Leu Asn  
 340 345 350  
 His Arg Ile Ala Ala Leu Thr Gly Leu Asp Val Arg Pro Pro Tyr Ala  
 355 360 365  
 Glu Tyr Leu Gln Val Val Asn Tyr Gly Ile Gly Gly His Tyr Glu Pro  
 370 375 380  
 His Phe Asp His Ala Thr Ser Pro Ser Ser Pro Leu Tyr Arg Met Lys  
 385 390 395 400  
 Ser Gly Asn Arg Val Ala Thr Phe Met Ile Tyr Leu Ser Ser Val Glu  
 405 410 415  
 Ala Gly Gly Ala Thr Ala Phe Ile Tyr Ala Asn Leu Ser Val Pro Val  
 420 425 430  
 Val Arg Asn Ala Ala Leu Phe Trp Trp Asn Leu His Arg Ser Gly Glu  
 435 440 445



Gly Asp Ser Asp Thr Leu His Ala Gly Cys Pro Val Leu Val Gly Asp  
450 455 460

Lys Trp Val Ala Asn Lys Trp Ile His Glu Tyr Gly Gln Glu Phe Arg  
465 470 475 480

Arg Pro Cys Ser Ser Ser Pro Glu Asp  
485

<210> 283

<211> 136

<212> PRT

<213> Homo sapiens

<400> 283

Ile Gln Pro Ser His Ala Ala Leu Leu His Cys Arg Ser Thr Phe Arg  
1 5 10 15

Lys Thr Glu Cys Leu Asp Pro Trp Trp Val Arg Arg Gln Leu Leu Gly  
20 25 30

Met Ala Gly Ile Gly Gly Leu Gln Lys Met Lys Ala Pro His Thr Gly  
35 40 45

Val Leu His Leu Gly Ser Val Trp Val Phe Leu Gly Pro Phe Leu Leu  
50 55 60

Gly Val Gly Tyr Thr Leu Thr Phe Asn Pro Leu Ser Gly Cys Met Ser  
65 70 75 80

Thr Val Arg Trp Leu Asn Ser Asn Ile Thr Ala Asn Arg Thr Leu Ser  
85 90 95

Arg Ser Val Cys His Val Thr Pro Leu His Arg Ser Leu Ser Pro His  
100 105 110

Asp Gly Glu Tyr Leu Arg Gln Met Leu Leu Asn Ser Ser Arg Ala  
115 120 125

Gly Glu Ala Gly Ser Trp Gly Tyr  
130 135

<210> 284

<211> 86

<212> PRT

<213> Homo sapiens

<400> 284

Cys Ser Ser Pro Pro Gly Arg Leu Pro Trp Cys Trp Thr Ala Pro Arg  
1 5 10 15

Thr Leu Gly Lys His Gly Ser Leu Ile Ser Thr Leu Arg Leu Thr Ala  
20 25 30

Pro Leu His Leu Ala Trp Lys Met Met Leu Ser Arg Lys Ala Leu Phe  
35 40 45

Val Leu Leu Asn Thr Pro Val Leu Phe His Ala Leu Glu Gly Arg Leu  
50 55 60

Phe Ser Lys Leu Cys His His Thr Ile Gln Arg Thr Leu Thr Val  
65 70 75 80

Pro Lys Phe Arg Ser Ser  
85

<210> 285

<211> 75

<212> PRT

<213> Homo sapiens

<400> 285

Arg Ser Pro Thr Ser Arg Val Gln Leu Leu Lys Arg Gln Ser Cys Pro  
1 5 10 15

Cys Gln Arg Asn Asp Leu Asn Glu Glu Pro Gln His Phe Thr His Tyr  
20 25 30

Ala Ile Tyr Asp Phe Ile Val Lys Gly Ser Cys Phe Cys Asn Gly His  
35 40 45

Ala Asp Gln Cys Ile Pro Val His Gly Phe Arg Pro Val Lys Ala Pro  
50 55 60

Gly Thr Phe His Met Val His Gly Lys Cys Met  
65 70 75

<210> 286

<211> 296

<212> PRT

<213> Homo sapiens

<400> 286

His Asn Thr Ala Gly Ser His Cys Gln His Cys Ala Pro Leu Tyr Asn  
1 5 10 15

Asp Arg Pro Trp Glu Ala Ala Asp Gly Lys Thr Gly Ala Pro Asn Glu  
20 25 30

Cys Arg Thr Cys Lys Cys Asn Gly His Ala Asp Thr Cys His Phe Asp  
35 40 45

Val Asn Val Trp Glu Ala Ser Gly Asn Arg Ser Gly Gly Val Cys Asp  
50 55 60

Asp Cys Gln His Asn Thr Glu Gly Gln Tyr Cys Gln Arg Cys Lys Pro  
65 70 75 80

Gly Phe Tyr Arg Asp Leu Arg Arg Pro Phe Ser Ala Pro Asp Ala Cys  
85 90 95

Lys Pro Cys Ser Cys His Pro Val Gly Ser Ala Val Leu Pro Ala Asn  
100 105 110

Ser Val Thr Phe Cys Asp Pro Ser Asn Gly Asp Cys Pro Cys Lys Pro  
 115 120 125  
 Gly Val Ala Gly Arg Arg Cys Asp Arg Cys Met Val Gly Tyr Trp Gly  
 130 135 140  
 Phe Gly Asp Tyr Gly Cys Arg Pro Cys Asp Cys Ala Gly Ser Cys Asp  
 145 150 155 160  
 Pro Ile Thr Gly Asp Cys Ile Ser Ser His Thr Asp Ile Asp Trp Tyr  
 165 170 175  
 His Glu Val Pro Asp Phe Arg Pro Val His Asn Lys Ser Glu Pro Ala  
 180 185 190  
 Trp Glu Trp Glu Asp Ala Gln Gly Phe Ser Ala Leu Leu His Ser Gly  
 195 200 205  
 Lys Cys Glu Cys Lys Glu Gln Thr Leu Gly Asn Ala Lys Ala Phe Cys  
 210 215 220  
 Gly Met Lys Tyr Ser Tyr Val Leu Lys Ile Lys Ile Leu Ser Ala His  
 225 230 235 240  
 Asp Lys Gly Thr His Val Glu Val Asn Val Lys Ile Lys Lys Val Leu  
 245 250 255  
 Lys Ser Thr Lys Leu Lys Ile Phe Arg Gly Lys Ala Asn Ile Ile Ser  
 260 265 270  
 Arg Ile Met Asp Gly Gln Arg Met His Leu Ser Asn Pro Gln Ser Trp  
 275 280 285  
 Phe Gly Ile Pro Cys Ser Arg Thr  
 290 295

&lt;210&gt; 287

&lt;211&gt; 37

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 287

Cys Asp Asp Cys Gln His Asn Thr Glu Gly Gln Tyr Cys Gln Arg Cys  
 1 5 10 15

Lys Pro Gly Phe Tyr Arg Asp Leu Arg Arg Pro Phe Ser Ala Pro Asp  
 20 25 30

Ala Cys Lys Pro Cys  
 35

&lt;210&gt; 288

&lt;211&gt; 36

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 288

Cys Pro Cys Lys Pro Gly Val Ala Gly Arg Arg Cys Asp Arg Cys Met  
 1 5 10 15

Val Gly Tyr Trp Gly Phe Gly Asp Tyr Gly Cys Arg Pro Cys Asp Cys  
 20 25 30

Ala Gly Ser Cys  
 35

&lt;210&gt; 289

&lt;211&gt; 66

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 289

Asn Ile Ser Ser Gln Tyr Cys Ile Leu Lys Ser Leu Glu Met Met Ile  
 1 5 10 15

Ser Gly Leu Lys Leu Leu Val Leu Phe Leu Lys Phe Ala Pro Glu Asn  
 20 25 30

Tyr Cys Leu Ser Thr Glu Thr Leu Gln Met Pro Asn Arg His Leu Arg  
 35 40 45

Leu Ser Lys Ala Thr Cys Tyr Leu Met Lys Cys Leu Leu Pro Ser Tyr  
 50 55 60

Phe Glu  
 65

&lt;210&gt; 290

&lt;211&gt; 88

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 290

Pro Ile Glu Gly Thr Pro Ala Gly Thr Gly Pro Glu Phe Pro Gly Arg  
 1 5 10 15

Pro Thr Arg Pro Gln Arg Met Arg Ser Leu Ile Ser Ser His Pro Cys  
 20 25 30

Gln His Leu Leu Leu Leu Leu Leu Leu Phe Leu Ile Leu Ala Ile  
 35 40 45

Leu Val Asp Val Lys Trp Tyr Leu Val Leu Phe Ile Cys Ile Ser Leu  
 50 55 60

Met Thr Ser Asp Val Glu His Leu Phe Met Cys Leu Leu Ala Ile Arg  
 65 70 75 80

Ile Ser Ser Trp Arg Asn Val Tyr  
 85

&lt;210&gt; 291

<211> 60  
<212> PRT  
<213> Homo sapiens

<400> 291  
Asn Trp Val Pro Thr Cys Leu Cys Pro Ser Ala Pro Cys Ser Phe His  
1 5 10 15  
Leu Leu Ser Arg Phe Lys Cys Leu Phe Ser Pro Gln Arg Leu Thr Asp  
20 25 30  
Ile Phe Arg Arg Tyr Asp Thr Asp Gln Asp Gly Trp Ile Gln Val Ser  
35 40 45  
Tyr Glu Gln Tyr Leu Ser Met Val Phe Ser Ile Val  
50 55 60

<210> 292  
<211> 33  
<212> PRT  
<213> Homo sapiens

<400> 292  
Gln Arg Leu Thr Asp Ile Phe Arg Arg Tyr Asp Thr Asp Gln Asp Gly  
1 5 10 15  
Trp Ile Gln Val Ser Tyr Glu Gln Tyr Leu Ser Met Val Phe Ser Ile  
20 25 30  
Val

<210> 293  
<211> 73  
<212> PRT  
<213> Homo sapiens

<220>  
<221> SITE  
<222> (38)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (48)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (54)  
<223> Xaa equals any of the naturally occurring L-amino acids

<220>  
<221> SITE  
<222> (55)  
<223> Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (68)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 293

Met Phe Tyr Lys Leu Thr Leu Ile Leu Cys Glu Leu Ser Val Ala Gly  
 1 5 10 15

Val Thr Gln Ala Ala Ser Gln Arg Pro Leu Gln Arg Leu Pro Arg His  
 20 25 30

Ile Cys Ser Gln Arg Xaa Pro Pro Gly Arg Cys Leu Leu Lys Ala Xaa  
 35 40 45

Leu Gln Thr Thr Trp Xaa Xaa Pro Asp Lys Pro Ile Pro Arg Leu Ser  
 50 55 60

Pro Pro Leu Xaa Ser Asp Pro Lys Arg  
 65 70

&lt;210&gt; 294

&lt;211&gt; 95

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 294

Thr Ser Ser Pro Val Phe Ser Phe Cys Ser Met Ala Val Arg Glu Pro  
 1 5 10 15

Asp His Leu Gln Arg Val Ser Leu Pro Arg Tyr Asn Val Ser Ala Ser  
 20 25 30

Leu Gln Trp Leu Pro Cys His Arg Ile Val Leu Gln Pro Trp His Met  
 35 40 45

Cys Ala Met Trp Glu Leu Gly Gln Val Leu Phe His Pro Val Ala Pro  
 50 55 60

Arg Glu Gly Ala Ala Pro Ser Pro Val Ser Thr Leu Thr Trp Pro Ser  
 65 70 75 80

Ser Cys Ser His Ser Glu Ser Thr Met Glu Leu Glu Leu Gln Phe  
 85 90 95

&lt;210&gt; 295

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 295

Met Ala Val Arg Glu Pro Asp His Leu Gln Arg Val Ser Leu Pro Arg  
 1 5 10 15

<210> 296  
 <211> 7  
 <212> PRT  
 <213> Homo sapiens

<400> 296  
 Leu Pro Cys His Arg Ile Val  
 1 5

<210> 297  
 <211> 15  
 <212> PRT  
 <213> Homo sapiens

<400> 297  
 Ser Leu Gln Trp Leu Pro Cys His Arg Ile Val Leu Gln Pro Trp  
 1 5 10 15

<210> 298  
 <211> 454  
 <212> PRT  
 <213> Homo sapiens

<400> 298  
 Cys Phe Lys Arg Lys Pro Lys Arg Glu His Cys Ser Cys Pro Ile Thr  
 1 5 10 15

Tyr Gln Ser Leu Gly Asp Ile Leu Asn Ala Ser Phe Phe Ser Lys Arg  
 20 25 30

Lys Gly Met Gln Glu Val Lys Leu Asn Ser Tyr Val Val Ser Gly Thr  
 35 40 45

Ile Gly Leu Lys Glu Lys Ile Ser Leu Ser Glu Pro Val Phe Leu Thr  
 50 55 60

Phe Arg His Asn Gln Pro Gly Asp Lys Arg Thr Lys His Ile Cys Val  
 65 70 75 80

Tyr Trp Glu Gly Ser Glu Gly Gly Arg Trp Ser Thr Glu Gly Cys Ser  
 85 90 95

His Val His Ser Asn Gly Ser Tyr Thr Lys Cys Lys Cys Phe His Leu  
 100 105 110

Ser Ser Phe Ala Val Leu Val Ala Leu Ala Pro Lys Glu Asp Pro Val  
 115 120 125

Leu Thr Val Ile Thr Gln Val Gly Leu Thr Ile Ser Leu Leu Cys Leu  
 130 135 140

Phe Leu Ala Ile Leu Thr Phe Leu Leu Cys Arg Pro Ile Gln Asn Thr  
 145 150 155 160

Ser Thr Ser Leu His Leu Glu Leu Ser Leu Cys Leu Phe Leu Ala His  
 165 170 175

Leu Leu Phe Leu Thr Gly Ile Asn Arg Thr Glu Pro Glu Val Leu Cys  
 180 185 190  
 Ser Ile Ile Ala Gly Leu Leu His Phe Leu Tyr Leu Ala Cys Phe Thr  
 195 200 205  
 Trp Met Leu Leu Glu Gly Leu His Leu Phe Leu Thr Val Arg Asn Leu  
 210 215 220  
 Lys Val Ala Asn Tyr Thr Ser Thr Gly Arg Phe Lys Lys Arg Phe Met  
 225 230 235 240  
 Tyr Pro Val Gly Tyr Gly Ile Pro Ala Val Ile Ile Ala Val Ser Ala  
 245 250 255  
 Ile Val Gly Pro Gln Asn Tyr Gly Thr Phe Thr His Cys Trp Leu Lys  
 260 265 270  
 Leu Asp Lys Gly Phe Ile Trp Ser Phe Met Gly Pro Val Ala Val Ile  
 275 280 285  
 Ile Leu Ile Asn Leu Val Phe Tyr Phe Gln Val Leu Trp Ile Leu Arg  
 290 295 300  
 Ser Lys Leu Ser Ser Leu Asn Lys Glu Val Ser Thr Ile Gln Asp Thr  
 305 310 315 320  
 Arg Val Met Thr Phe Lys Ala Ile Ser Gln Leu Phe Ile Leu Gly Cys  
 325 330 335  
 Ser Trp Gly Leu Gly Phe Phe Met Val Glu Glu Val Gly Lys Thr Ile  
 340 345 350  
 Gly Ser Ile Ile Ala Tyr Ser Phe Thr Ile Ile Asn Thr Leu Gln Gly  
 355 360 365  
 Val Leu Leu Phe Val Val His Cys Leu Leu Asn Arg Gln Val Arg Met  
 370 375 380  
 Glu Tyr Lys Lys Trp Phe Ser Gly Met Arg Lys Gly Val Glu Thr Glu  
 385 390 395 400  
 Ser Thr Glu Met Ser Arg Ser Thr Thr Gln Thr Lys Thr Glu Glu Val  
 405 410 415  
 Gly Lys Ser Ser Glu Ile Phe His Lys Gly Gly Thr Ala Ser Ser Ser  
 420 425 430  
 Ala Glu Ser Thr Lys Gln Pro Gln Pro Gln Val His Leu Val Ser Ala  
 435 440 445  
 Ala Trp Leu Lys Met Asn  
 450

&lt;210&gt; 299

&lt;211&gt; 101

&lt;212&gt; PRT



<213> Homo sapiens

<400> 299

Phe Phe Trp Lys Glu Asn Leu Arg Arg Asn Gly Ser Arg Glu Asp Phe  
1 5 10 15

Ala Arg Arg Ala Thr Gln Leu Ile Gln Ser Val Glu Leu Ser Ile Trp  
20 25 30

Asn Ala Ser Phe Ala Ser Pro Gly Lys Gly Gln Ile Ser Glu Phe Asp  
35 40 45

Ile Val Tyr Glu Thr Lys Arg Cys Asn Glu Thr Arg Glu Asn Ala Phe  
50 55 60

Leu Glu Ala Gly Asn Asn Thr Met Asp Ile Asn Cys Ala Asp Ala Leu  
65 70 75 80

Lys Gly Asn Leu Arg Glu Ser Thr Ala Val Ala Leu Ser Leu Ile Asn  
85 90 95

Leu Leu Gly Ile Phe  
100

<210> 300

<211> 27

<212> PRT

<213> Homo sapiens

<400> 300

Asp Ile Asn Glu Cys Glu Thr Gly Leu Ala Lys Cys Lys Tyr Lys Ala  
1 5 10 15

Tyr Cys Arg Asn Lys Val Gly Gly Tyr Ile Cys  
20 25

<210> 301

<211> 12

<212> PRT

<213> Homo sapiens

<400> 301

Cys Arg Asn Lys Val Gly Gly Tyr Ile Cys Ser Cys  
1 5 10

<210> 302

<211> 331

<212> PRT

<213> Homo sapiens

<400> 302

Ala Leu Cys Pro His Pro His Leu Ile Leu Asn Val Thr Val Ser Pro  
1 5 10 15

Ala Pro Ser Cys Arg His Val Lys Lys Val Val Ala Ser Pro Ser Pro  
20 25 30

Ser Thr Thr Met Ile Ala Met Asp Ala Pro His Ser Lys Ala Ala Leu  
 35 40 45  
 Asp Ser Ile Asn Glu Leu Pro Glu Asn Ile Leu Leu Glu Leu Phe Thr  
 50 55 60  
 His Val Pro Ala Arg Gln Leu Leu Leu Asn Cys Arg Leu Val Cys Ser  
 65 70 75 80  
 Leu Trp Arg Asp Leu Ile Asp Leu Met Thr Leu Trp Lys Arg Lys Cys  
 85 90 95  
 Leu Arg Glu Gly Phe Ile Thr Lys Asp Trp Asp Gln Pro Val Ala Asp  
 100 105 110  
 Trp Lys Ile Phe Tyr Phe Leu Arg Ser Leu His Arg Asn Leu Leu Arg  
 115 120 125  
 Asn Pro Cys Ala Glu Glu Asp Met Phe Ala Trp Gln Ile Asp Phe Asn  
 130 135 140  
 Gly Gly Asp Arg Trp Lys Val Glu Ser Leu Pro Gly Ala His Gly Thr  
 145 150 155 160  
 Asp Phe Pro Asp Pro Lys Val Lys Lys Tyr Phe Val Thr Ser Tyr Glu  
 165 170 175  
 Met Cys Leu Lys Ser Gln Leu Val Asp Leu Val Ala Glu Gly Tyr Trp  
 180 185 190  
 Glu Glu Leu Leu Asp Thr Phe Arg Pro Asp Ile Val Val Lys Asp Trp  
 195 200 205  
 Phe Ala Ala Arg Ala Asp Cys Gly Cys Thr Tyr Gln Leu Lys Val Gln  
 210 215 220  
 Leu Ala Ser Ala Asp Tyr Phe Val Leu Ala Ser Phe Glu Pro Pro Pro  
 225 230 235 240  
 Val Thr Ile Gln Gln Trp Asn Asn Ala Thr Trp Thr Glu Val Ser Tyr  
 245 250 255  
 Thr Phe Ser Asp Tyr Pro Arg Gly Val Arg Tyr Ile Leu Phe Gln His  
 260 265 270  
 Gly Gly Arg Asp Thr Gln Tyr Trp Ala Gly Trp Tyr Gly Pro Arg Val  
 275 280 285  
 Thr Asn Ser Ser Ile Val Val Ser Pro Lys Met Thr Arg Asn Gln Ala  
 290 295 300  
 Ser Ser Glu Ala Gln Pro Gly Gln Lys His Gly Gln Glu Glu Ala Ala  
 305 310 315 320  
 Gln Ser Pro Tyr Arg Ala Val Val Gln Ile Phe  
 325 330

201

&lt;210&gt; 303

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 303

Arg Gln Arg Ser Trp Asn Pro Gly Thr Asn Cys Tyr His Pro Asn Met  
 1 5 10 15

Pro Asp Ala Phe Leu Thr Cys Glu Thr Val Ile Phe Ala Trp Ala Ile  
 20 25 30

Gly Gly Glu Gly Phe Ser Tyr Pro Pro His Val Gly Leu Ser Leu Gly  
 35 40 45

Thr Pro Leu Asp Pro His Tyr Val Leu Leu Glu Val His Tyr Asp Asn  
 50 55 60

Pro Thr Tyr Glu Glu Gly Leu Ile Asp Asn Ser Gly Leu Arg Leu Phe  
 65 70 75 80

Tyr Thr Met Asp Ile Arg Lys Tyr Asp Ala Gly Val Ile Glu Ala Gly  
 85 90 95

Leu Trp Val Ser Leu Phe His Thr Ile Pro Pro Gly Met Pro Glu Phe  
 100 105 110

Gln Ser Glu Gly His Cys Thr Leu Glu Cys Leu Glu Glu Ala Leu Glu  
 115 120 125

Ala Glu Lys Pro Ser Gly Ile His Val Phe Ala Val Leu Leu His Ala  
 130 135 140

His Leu Ala Gly Arg Gly Ile Arg Leu Arg His Phe Arg Lys Gly Lys  
 145 150 155 160

Glu Met Lys Leu Leu Ala Tyr Asp Asp Asp Phe Asp Phe Asn Phe Gln  
 165 170 175

Glu Phe Gln Tyr Leu Lys Glu Glu Gln Thr Ile Leu Pro Gly Asp Asn  
 180 185 190

Leu Ile Thr Glu Cys Arg Tyr Asn Thr Lys Asp Arg Ala Glu Met Thr  
 195 200 205

Trp Gly Gly Leu Ser Thr Arg Ser Glu Met Cys Leu Ser Tyr Leu Leu  
 210 215 220

Tyr Tyr Pro Arg Ile Asn Leu Thr Arg Cys Ala Ser Ile Pro Asp Ile  
 225 230 235 240

Met Glu Gln Leu Gln Phe Ile Gly Val Lys Glu Ile Tyr Arg Pro Val  
 245 250 255

Thr Thr Trp Pro Phe Ile Ile Lys Ser Pro Lys Gln Tyr Lys Asn Leu  
 260 265 270

Ser Phe Met Asp Ala Met Asn Lys Phe Lys Trp Thr Lys Lys Glu Gly  
 275 280 285

Leu Ser Phe Asn Lys Leu Val Leu Ser Leu Pro Val Asn Val Arg Cys  
 290 295 300

Ser Lys Thr Asp Asn Ala Glu Trp Ser Ile Pro Arg Asn Asp Ser Ile  
 305 310 315 320

Thr Ser Arg Tyr Arg Lys Thr Leu  
 325

<210> 304

<211> 272

<212> PRT

<213> Homo sapiens

<400> 304

Met Cys Cys Trp Pro Leu Leu Leu Leu Trp Gly Leu Leu Pro Gly Thr  
 1 5 10 15

Ala Ala Gly Gly Ser Gly Arg Thr Tyr Pro His Arg Thr Leu Leu Asp  
 20 25 30

Ser Glu Gly Lys Tyr Trp Leu Gly Trp Ser Gln Arg Gly Ser Gln Ile  
 35 40 45

Ala Phe Arg Leu Gln Val Arg Thr Ala Gly Tyr Val Gly Phe Gly Phe  
 50 55 60

Ser Pro Thr Gly Ala Met Ala Ser Ala Asp Ile Val Val Gly Gly Val  
 65 70 75 80

Ala His Gly Arg Pro Tyr Leu Gln Asp Tyr Phe Thr Asn Ala Asn Arg  
 85 90 95

Glu Leu Lys Lys Asp Ala Gln Gln Asp Tyr His Leu Glu Tyr Ala Met  
 100 105 110

Glu Asn Ser Thr His Thr Ile Ile Glu Phe Thr Arg Glu Leu His Thr  
 115 120 125

Cys Asp Ile Asn Asp Lys Ser Ile Thr Asp Ser Thr Val Arg Val Ile  
 130 135 140

Trp Ala Tyr His His Glu Asp Ala Gly Glu Ala Gly Pro Lys Tyr His  
 145 150 155 160

Asp Ser Asn Arg Gly Thr Lys Ser Leu Arg Leu Leu Asn Pro Glu Lys  
 165 170 175

Thr Ser Val Leu Ser Thr Ala Leu Pro Tyr Phe Asp Leu Val Asn Gln  
 180 185 190

Asp Val Pro Ile Pro Asn Lys Asp Thr Thr Tyr Trp Cys Gln Met Phe  
 195 200 205

Lys Ile Pro Val Phe Gln Glu Lys His His Val Ile Lys Val Glu Pro  
 210 215 220

Val Ile Gln Arg Gly His Glu Ser Leu Val His His Ile Leu Leu Tyr  
 225 230 235 240  
 Gln Cys Ser Asn Asn Phe Asn Asp Ser Val Pro Gly Ile Arg Ala Arg  
 245 250 255  
 Ile Ala Ile Thr Pro Thr Cys Pro Met His Ser Ser Pro Val Lys Leu  
 260 265 270

<210> 305  
 <211> 207  
 <212> PRT  
 <213> Homo sapiens

<400> 305  
 Thr Gly Thr Phe Trp Ser Pro Arg Ser Gln Arg Arg Gly Cys Cys Gly  
 1 5 10 15  
 Arg Arg Ala Pro Arg Pro Glu Ala Met Glu Asn Gly Ala Val Tyr Ser  
 20 25 30  
 Pro Thr Thr Glu Glu Asp Pro Gly Pro Ala Arg Gly Pro Arg Ser Gly  
 35 40 45  
 Leu Ala Ala Tyr Phe Phe Met Gly Arg Leu Pro Leu Leu Arg Arg Val  
 50 55 60  
 Leu Lys Gly Leu Gln Leu Leu Ser Leu Leu Ala Phe Ile Cys Glu  
 65 70 75 80  
 Glu Val Val Ser Gln Cys Thr Leu Cys Gly Gly Leu Tyr Phe Phe Glu  
 85 90 95  
 Phe Val Ser Cys Ser Ala Phe Leu Leu Ser Leu Leu Ile Leu Ile Val  
 100 105 110  
 Tyr Cys Thr Pro Phe Tyr Glu Arg Val Asp Thr Thr Lys Val Lys Ser  
 115 120 125  
 Ser Asp Phe Tyr Ile Thr Leu Gly Thr Gly Cys Val Phe Leu Leu Ala  
 130 135 140  
 Ser Ile Ile Phe Val Ser Thr His Asp Arg Thr Ser Ala Glu Ile Ala  
 145 150 155 160  
 Ala Ile Val Phe Gly Phe Ile Ala Ser Phe Met Phe Leu Leu Asp Phe  
 165 170 175  
 Ile Thr Met Leu Tyr Glu Lys Arg Gln Glu Ser Gln Leu Arg Lys Pro  
 180 185 190  
 Glu Asn Thr Thr Arg Ala Glu Ala Leu Thr Glu Pro Leu Asn Ala  
 195 200 205

<210> 306  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 306  
 Ala Ser Ala Pro Arg Val Met Arg Gly His Leu Ala Gly Phe Pro Ala  
   1                  5                  10                  15  
 Leu Ser Gly Leu Ala Ser Val Cys Leu Trp Ala Thr Phe Ser Ala Gln  
           20                  25                  30  
 Leu Pro Gly Pro Val Ala Ala Thr Ser Trp Thr Pro Ala Pro Leu Gly  
           35                  40                  45  
 Cys Ser Ala Ala Arg Ser Gly Pro Glu Lys Arg Leu Gly Thr Ala Ala  
   50                  55                  60  
 Pro Gly Ser Ala Ala Ser Leu Ala Gln Ala Gly Pro Gly Ala Pro Cys  
   65                  70                  75                  80  
 Arg Val Leu Pro Val Asp Pro Ala Pro Ala Ala Leu Asn Val Arg Glu  
                   85                  90                  95  
 Pro Gly Trp Leu Gly Gly Leu Phe Asp Gly Ala Leu Leu Gln Val Leu  
           100                  105                  110  
 Leu Asn Phe Leu Arg Lys Ser Thr Asp Val Leu Met Asp Thr Arg Glu  
   115                  120                  125  
 Ala Glu Ser Leu Glu Val Glu  
   130                  135

<210> 307  
 <211> 188  
 <212> PRT  
 <213> Homo sapiens

<400> 307  
 Asn Lys Leu His Ser Phe Pro Val Phe Leu Ser Gln Leu Leu Leu Asp  
   1                  5                  10                  15  
 Arg Gln Leu Leu His Ala Pro Gln Thr Leu Pro Thr Pro His Cys Gly  
           20                  25                  30  
 Gly Ser Ser Arg Pro Gly Pro Ser His Pro Pro Trp Leu Leu Ile Gln  
           35                  40                  45  
 Leu Pro Cys Val His Val Ala Leu Trp Gln Met Leu Arg Asp Phe Ser  
   50                  55                  60  
 Asp Ser Arg Ile Thr Pro Ser Thr Leu Thr Thr Gln Pro Ala Ala Gln  
   65                  70                  75                  80  
 Thr Ala Ala Pro Ala Lys Asp Gln Glu Ser Asp Ile Val Gly Gly Glu  
           85                  90                  95  
 Gly Ile Leu Cys Asp Ile Ala Phe Leu Gln Glu Asp His Pro Leu Gly

Pro Thr Asp Val Leu Lys Ile Arg Met Gln  
1 5 10

<210> 311  
 <211> 313  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (117)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 311  
 Met Thr Phe Gly Ser Thr Ile Ser Pro Thr Ser Thr His Ala Ser Pro  
     1                    5                    10                    15  
 Ser Leu Gly Phe Cys Cys Ser Trp Leu Leu Glu Asp Leu Glu Glu Gln  
                     20                    25                    30  
 Leu Tyr Cys Ser Ala Phe Glu Glu Ala Ala Leu Thr Arg Arg Ile Cys  
                     35                    40                    45  
 Asn Pro Thr Ser Cys Trp Leu Pro Leu Asp Met Glu Leu Leu His Arg  
                     50                    55                    60  
 Gln Val Leu Ala Leu Gln Thr Gln Arg Val Leu Leu Gly Met Trp Leu  
                     65                    70                    75                    80  
 Arg Arg Ala Trp Asp Thr Trp Val Ser Pro Arg Arg Val Ala Pro Gly  
                     85                    90                    95  
 Ser Arg Cys Leu Leu Thr Ala Ser His Pro Cys Thr Glu Lys Arg Arg  
                     100                    105                    110  
 Lys Ala Ser Ala Xaa Gln Arg Asn Leu Gly Tyr Pro Leu Ala Met Leu  
                     115                    120                    125  
 Cys Leu Leu Val Leu Thr Gly Leu Ser Val Leu Ile Val Ala Ile His  
                     130                    135                    140  
 Ile Leu Glu Leu Leu Ile Asp Glu Ala Ala Met Pro Arg Gly Met Gln  
                     145                    150                    155                    160  
 Gly Thr Ser Leu Gly Gln Val Ser Phe Ser Lys Leu Gly Ser Phe Gly  
                     165                    170                    175  
 Ala Val Ile Gln Val Val Leu Ile Phe Tyr Leu Met Val Ser Ser Val  
                     180                    185                    190  
 Val Gly Phe Tyr Ser Ser Pro Leu Phe Arg Ser Leu Arg Pro Arg Trp  
                     195                    200                    205  
 His Asp Thr Ala Met Thr Gln Ile Ile Gly Asn Cys Val Cys Leu Leu  
                     210                    215                    220  
 Val Leu Ser Ser Ala Leu Pro Val Phe Ser Arg Thr Leu Gly Leu Thr  
                     225                    230                    235                    240  
 Arg Phe Asp Leu Leu Gly Asp Phe Gly Arg Phe Asn Trp Leu Gly Asn  
                     245                    250                    255



Phe Tyr Ile Val Phe Leu Tyr Asn Ala Ala Phe Ala Gly Leu Thr Thr  
260 265 270

Leu Cys Leu Val Lys Thr Phe Thr Ala Ala Val Arg Ala Glu Leu Ile  
275 280 285

Arg Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro  
290 295 300

Gln Ala Ser Arg Lys Thr Gln His Gln  
305 310

<210> 312

<211> 92

<212> PRT

<213> Homo sapiens

<400> 312

Leu Cys Val Cys Leu Val Tyr Leu Cys Met Tyr Gly Val Cys Leu Cys  
1 5 10 15

Val Ile Val Cys Val Ser Gly Val Ser Leu Cys Leu Tyr Val Trp Gly  
20 25 30

Val Ser Val Cys Asp Cys Val Ser Val Phe Met Cys Val Cys Leu Cys  
35 40 45

Val Ile Phe Cys Val Tyr Gly Lys Pro Arg Thr Glu His Tyr His Ser  
50 55 60

Pro His Leu Ala Lys Gln Lys Ala Phe Arg Glu Met Cys Gly Arg His  
65 70 75 80

Asp Val Ser Ala Ala Gly Ile Phe Gln Ser Tyr Val  
85 90

<210> 313

<211> 207

<212> PRT

<213> Homo sapiens

<400> 313

Gly His Met Pro Tyr Gly Trp Leu Thr Glu Ile Arg Ala Val Tyr Pro  
1 5 10 15

Ala Phe Asp Lys Asn Asn Pro Ser Asn Lys Leu Val Ser Thr Ser Asn  
20 25 30

Thr Val Thr Ala Ala His Ile Lys Lys Phe Thr Phe Val Cys Met Ala  
35 40 45

Leu Ser Leu Thr Leu Cys Phe Val Met Phe Trp Thr Pro Asn Val Ser  
50 55 60

Glu Lys Ile Leu Ile Asp Ile Ile Gly Val Asp Phe Ala Phe Ala Glu  
65 70 75 80

Leu Cys Val Val Pro Leu Arg Ile Phe Ser Phe Phe Pro Val Pro Val  
                             85                            90                            95  
 Thr Val Arg Ala His Leu Thr Gly Trp Leu Met Thr Leu Lys Lys Thr  
                             100                            105                            110  
 Phe Val Leu Ala Pro Ser Ser Val Leu Arg Ile Ile Val Leu Ile Ala  
                             115                            120                            125  
 Ser Leu Val Val Leu Pro Tyr Leu Gly Val His Gly Ala Thr Leu Gly  
                             130                            135                            140  
 Val Gly Ser Leu Leu Ala Gly Phe Val Gly Glu Ser Thr Met Val Ala  
                             145                            150                            155                            160  
 Ile Ala Ala Cys Tyr Val Tyr Arg Lys Gln Lys Lys Lys Met Glu Asn  
                             165                            170                            175  
 Glu Ser Ala Thr Glu Gly Glu Asp Ser Ala Met Thr Asp Met Pro Pro  
                             180                            185                            190  
 Thr Glu Glu Val Thr Asp Ile Val Glu Met Arg Glu Glu Asn Glu  
                             195                            200                            205

<210> 314  
 <211> 114  
 <212> PRT  
 <213> Homo sapiens

<400> 314  
 Gln Val Val Phe Val Ala Ile Leu Leu His Ser His Leu Glu Cys Arg  
     1                            5                            10                            15  
 Glu Pro Leu Leu Ile Pro Ile Leu Ser Leu Tyr Met Gly Ala Leu Val  
                             20                            25                            30  
 Arg Cys Thr Thr Leu Cys Leu Gly Tyr Tyr Lys Asn Ile His Asp Ile  
                             35                            40                            45  
 Ile Pro Asp Arg Ser Gly Pro Glu Leu Gly Gly Asp Ala Thr Ile Arg  
                             50                            55                            60  
 Lys Met Leu Ser Phe Trp Trp Pro Leu Ala Leu Ile Leu Ala Thr Gln  
                             65                            70                            75                            80  
 Arg Ile Ser Arg Pro Ile Val Asn Leu Phe Val Ser Arg Asp Leu Gly  
                             85                            90                            95  
 Gly Ser Ser Ala Ala Thr Glu Ala Val Ala Ile Leu Thr Ala Thr Tyr  
                             100                            105                            110  
 Pro Val

<210> 315  
 <211> 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 315

Arg Cys Cys Cys Arg Gly Cys Ser Cys Arg Ala Arg Leu Cys Pro Pro  
1 5 10 15

Ala Arg Ser Thr Ala Val Ala Pro Glu Cys Arg Gly Ala His Pro Ser  
20 25 30

Arg Ala Met Arg Pro Gly Thr Ala Leu Gln Ala Val Leu Leu Ala Val  
35 40 45

Leu Leu Val Gly Leu Arg Ala Ala Thr Gly Arg Leu Leu Ser Gly Gln  
50 55 60

Pro Val Cys Arg Gly Gly Thr Gln Arg Pro Cys Tyr Lys Val Ile Tyr  
65 70 75 80

Phe His Asp Thr Ser Arg Arg Leu Asn Phe Glu Glu Ala Lys Glu Ala  
85 90 95

Cys Arg Arg Gly Trp Arg Pro Ala Ser Gln His Arg Val Leu Lys Met  
100 105 110

Asn Arg Asn  
115

&lt;210&gt; 316

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 316

Met Arg Pro Gly Thr Ala Leu Gln Ala Val Leu Leu Ala Val Leu Leu  
1 5 10 15

Val Gly Leu Arg Ala Ala Thr Gly Arg Leu Leu Ser Gly Gln Pro Val  
20 25 30

Cys Arg Gly Gly Thr Gln Arg Pro Cys Tyr Lys Val Ile Tyr Phe His  
35 40 45

Asp Thr Ser Arg Arg Leu Asn Phe Glu Glu Ala Lys Glu Ala Cys Arg  
50 55 60

Arg Gly Trp Arg Pro Ala Ser Gln His Arg Val Leu Lys Met Asn Arg  
65 70 75 80

Asn

&lt;210&gt; 317

&lt;211&gt; 290

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 317

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Ile Arg His Glu Gln Gln Gly Glu Glu Asp Asp Glu His Ala Arg Pro
 1             5             10             15

Leu Ala Glu Ser Leu Leu Leu Ala Ile Ala Asp Leu Leu Phe Cys Pro
      20             25             30

Asp Phe Thr Val Gln Ser His Arg Arg Ser Thr Val Asp Ser Ala Glu
      35             40             45

Asp Val His Ser Leu Asp Ser Cys Glu Tyr Ile Trp Glu Ala Gly Val
      50             55             60

Gly Phe Ala His Ser Pro Gln Pro Asn Tyr Ile His Asp Met Asn Arg
      65             70             75             80

Met Glu Leu Leu Lys Leu Leu Leu Thr Cys Phe Ser Glu Ala Met Tyr
      85             90             95

Leu Pro Pro Ala Pro Glu Ser Gly Ser Thr Asn Pro Trp Val Gln Phe
      100             105             110

Phe Cys Ser Thr Glu Asn Arg His Ala Leu Pro Leu Phe Thr Ser Leu
      115             120             125

Leu Asn Thr Val Cys Ala Tyr Asp Pro Val Gly Tyr Gly Ile Pro Tyr
      130             135             140

Asn His Leu Leu Phe Ser Asp Tyr Arg Glu Pro Leu Val Glu Glu Ala
      145             150             155             160

Ala Gln Val Leu Ile Val Thr Leu Asp His Asp Ser Ala Ser Ser Ala
      165             170             175

Ser Pro Thr Val Asp Gly Thr Thr Thr Gly Thr Ala Met Asp Asp Ala
      180             185             190

Asp Pro Pro Gly Pro Glu Asn Leu Phe Val Asn Tyr Leu Ser Arg Ile
      195             200             205

His Arg Glu Glu Asp Phe Gln Phe Ile Leu Lys Gly Ile Ala Arg Leu
      210             215             220

Leu Ser Asn Pro Leu Leu Gln Thr Tyr Leu Pro Asn Ser Thr Lys Lys
      225             230             235             240

Asp Pro Val Pro Pro Gly Ala Ala Ser Ser Leu Leu Glu Ala Leu Arg
      245             250             255

Leu Gln Gln Glu Ile Pro Leu Leu Arg Ala Glu Glu Gln Arg Arg Pro
      260             265             270

Arg His Pro Cys Pro His Pro Leu Leu Pro Gln Arg Cys Pro Gly Arg
      275             280             285

Ser Val
      290

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&lt;210&gt; 318

&lt;211&gt; 318

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 318

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Arg Leu Val Tyr Asn Lys Thr Ser Arg Ala Thr Gln Phe Pro Asp Gly
 1             5             10             15

Val Asp Val Arg Val Pro Gly Phe Gly Lys Thr Phe Ser Leu Glu Phe
      20             25             30

Leu Asp Pro Ser Lys Ser Ser Val Gly Ser Tyr Phe His Thr Met Val
      35             40             45

Glu Ser Leu Val Gly Trp Gly Tyr Thr Arg Gly Glu Asp Val Arg Gly
      50             55             60

Ala Pro Tyr Asp Trp Arg Arg Ala Pro Asn Glu Asn Gly Pro Tyr Phe
      65             70             75             80

Leu Ala Leu Arg Glu Met Ile Glu Glu Met Tyr Gln Leu Tyr Gly Gly
      85             90             95

Pro Val Val Leu Val Ala His Ser Met Gly Asn Met Tyr Thr Leu Tyr
      100            105            110

Phe Leu Gln Arg Gln Pro Gln Ala Trp Lys Asp Lys Tyr Ile Arg Ala
      115            120            125

Phe Val Ser Leu Gly Ala Pro Trp Gly Gly Val Ala Lys Thr Leu Arg
      130            135            140

Val Leu Ala Ser Gly Asp Asn Asn Arg Ile Pro Val Ile Gly Pro Leu
      145            150            155            160

Lys Ile Arg Glu Gln Gln Arg Ser Ala Val Ser Thr Ser Trp Leu Leu
      165            170            175

Pro Tyr Asn Tyr Thr Trp Ser Pro Glu Lys Val Phe Val Gln Thr Pro
      180            185            190

Thr Ile Asn Tyr Thr Leu Arg Asp Tyr Arg Lys Phe Phe Gln Asp Ile
      195            200            205

Gly Phe Glu Asp Gly Trp Leu Met Arg Gln Asp Thr Glu Gly Leu Val
      210            215            220

Glu Ala Thr Met Pro Pro Gly Val Gln Leu His Cys Leu Tyr Gly Thr
      225            230            235            240

Gly Val Pro Thr Pro Asp Ser Phe Tyr Tyr Glu Ser Phe Pro Asp Arg
      245            250            255

Asp Pro Lys Ile Cys Phe Gly Asp Gly Asp Gly Thr Val Asn Leu Lys
      260            265            270

Ser Ala Leu Gln Cys Gln Ala Trp Gln Ser Arg Gln Glu His Gln Val
      275            280            285

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Leu Leu Gln Glu Leu Pro Gly Ser Glu His Ile Glu Met Leu Ala Asn  
 290 295 300

Ala Thr Thr Leu Ala Tyr Leu Lys Arg Val Leu Leu Gly Pro  
 305 310 315

<210> 319

<211> 362

<212> PRT

<213> Homo sapiens

<400> 319

Met Asn Lys Glu Asp Lys Val Trp Asn Asp Cys Lys Gly Val Asn Lys  
 1 5 10 15

Leu Thr Asn Leu Glu Glu Gln Tyr Ile Ile Leu Ile Phe Gln Asn Gly  
 20 25 30

Leu Asp Pro Pro Ala Asn Met Val Phe Glu Ser Ile Ile Asn Glu Ile  
 35 40 45

Gly Ile Lys Asn Asn Ile Ser Asn Phe Phe Ala Lys Ile Pro Phe Glu  
 50 55 60

Glu Ala Asn Gly Arg Leu Val Ala Cys Thr Arg Thr Tyr Glu Glu Ser  
 65 70 75 80

Ile Lys Gly Ser Cys Gly Gln Lys Glu Asn Lys Ile Lys Thr Val Ser  
 85 90 95

Phe Glu Ser Lys Ile Gln Leu Arg Ser Lys Gln Glu Phe Gln Phe Phe  
 100 105 110

Asp Glu Glu Glu Glu Thr Gly Glu Asn His Thr Ile Phe Ile Gly Pro  
 115 120 125

Val Glu Lys Leu Ile Val Tyr Pro Pro Pro Pro Ala Lys Gly Gly Ile  
 130 135 140

Ser Val Thr Asn Glu Asp Leu His Cys Leu Asn Glu Gly Glu Phe Leu  
 145 150 155 160

Asn Asp Val Ile Ile Asp Phe Tyr Leu Lys Tyr Leu Val Leu Glu Lys  
 165 170 175

Leu Lys Lys Glu Asp Ala Asp Arg Ile His Ile Phe Ser Ser Phe Phe  
 180 185 190

Tyr Lys Arg Leu Asn Gln Arg Glu Arg Arg Asn His Glu Thr Thr Asn  
 195 200 205

Leu Ser Ile Gln Gln Lys Arg His Gly Arg Val Lys Thr Trp Thr Arg  
 210 215 220

His Val Asp Ile Phe Glu Lys Asp Phe Ile Phe Val Pro Leu Asn Glu  
 225 230 235 240

Ala Ala His Trp Phe Leu Ala Val Val Cys Phe Pro Gly Leu Glu Lys  
245 250 255

Pro Lys Tyr Glu Pro Asn Pro His Tyr His Glu Asn Ala Val Ile Gln  
260 265 270

Lys Cys Ser Thr Val Glu Asp Ser Cys Ile Ser Ser Ser Ala Ser Glu  
275 280 285

Met Glu Ser Cys Ser Gln Asn Ser Ser Ala Lys Pro Val Ile Lys Lys  
290 295 300

Met Leu Asn Lys Lys His Cys Ile Ala Val Ile Asp Ser Asn Pro Gly  
305 310 315 320

Gln Glu Glu Ser Asp Pro Arg Tyr Lys Arg Asn Ile Cys Ser Val Lys  
325 330 335

Tyr Ser Val Lys Lys Ile Asn His Thr Ala Ser Glu Asn Glu Glu Phe  
340 345 350

Asn Lys Gly Glu Ser Thr Ser Gln Lys Ser  
355 360

<210> 320

<211> 330

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (38)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (247)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 320

Met Ser Pro Leu Ser Ala Ala Arg Ala Ala Leu Arg Val Tyr Ala Val  
1 5 10 15

Gly Ala Ala Val Ile Leu Ala Gln Leu Leu Arg Arg Cys Arg Gly Gly  
20 25 30

Phe Leu Glu Pro Val Xaa Pro Pro Arg Pro Asp Arg Val Ala Ile Val  
35 40 45

Thr Gly Gly Thr Asp Gly Ile Gly Tyr Ser Thr Ala Asn Ile Trp Arg  
50 55 60

Asp Leu Gly Met His Val Ile Ile Ala Gly Asn Asn Asp Ser Lys Ala  
65 70 75 80

Lys Gln Val Val Ser Lys Ile Lys Glu Glu Thr Leu Asn Asp Lys Val  
85 90 95

Glu Phe Leu Tyr Cys Asp Leu Ala Ser Met Thr Ser Ile Arg Gln Phe  
                   100                                  105                                  110  
 Val Gln Lys Phe Lys Met Lys Lys Ile Pro Leu His Val Leu Ile Asn  
                   115                                  120                                  125  
 Asn Ala Gly Val Met Met Val Pro Gln Arg Lys Thr Arg Asp Gly Phe  
                   130                                  135                                  140  
 Glu Glu His Phe Gly Leu Asn Tyr Leu Gly His Phe Leu Leu Thr Asn  
   145                                  150                                  155                                  160  
 Leu Leu Leu Asp Thr Leu Lys Glu Ser Gly Ser Pro Gly His Ser Ala  
                   165                                  170                                  175  
 Arg Val Val Thr Val Ser Ser Ala Thr His Tyr Val Ala Glu Leu Asn  
                   180                                  185                                  190  
 Met Asp Asp Leu Gln Ser Ser Ala Cys Tyr Ser Pro His Ala Ala Tyr  
                   195                                  200                                  205  
 Ala Gln Ser Lys Leu Ala Leu Val Leu Phe Thr Tyr His Leu Gln Arg  
                   210                                  215                                  220  
 Leu Leu Ala Ala Glu Gly Ser His Val Thr Ala Asn Val Val Asp Pro  
   225                                  230                                  235                                  240  
 Gly Val Val Asn Thr Asp Xaa Tyr Lys His Val Phe Trp Ala Thr Arg  
                   245                                  250                                  255  
 Leu Ala Lys Lys Leu Leu Gly Trp Leu Leu Phe Lys Thr Pro Asp Glu  
                   260                                  265                                  270  
 Gly Ala Trp Thr Ser Ile Tyr Ala Ala Val Thr Pro Glu Leu Glu Gly  
                   275                                  280                                  285  
 Val Gly Gly Arg Tyr Leu Tyr Asn Glu Lys Glu Thr Lys Ser Leu His  
                   290                                  295                                  300  
 Val Thr Tyr Asn Gln Lys Leu Gln Gln Gln Leu Trp Ser Lys Ser Cys  
   305                                  310                                  315                                  320  
 Glu Met Thr Gly Val Leu Asp Val Thr Leu  
                   325                                  330

&lt;210&gt; 321

&lt;211&gt; 71

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (38)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 321

Met Ser Pro Leu Ser Ala Ala Arg Ala Ala Leu Arg Val Tyr Ala Val  
   1                                  5                                  10                                  15



Gly Ala Ala Val Ile Leu Ala Gln Leu Leu Arg Arg Cys Arg Gly Gly  
                   20                                  25                                  30

Phe Leu Glu Pro Val Xaa Pro Pro Arg Pro Asp Arg Val Ala Ile Val  
                   35                                  40                                  45

Thr Gly Gly Thr Asp Gly Ile Gly Tyr Ser Thr Ala Asn Ile Trp Arg  
           50                                  55                                  60

Asp Leu Ala Cys Met Leu Ser  
       65                                  70

<210> 322

<211> 266

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (97)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (174)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (195)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (199)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (206)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 322

Met Glu Val Thr Thr Glu Asp Thr Ser Arg Thr Asp Val Ser Glu Pro  
       1                                  5                                  10                                  15

Ala Thr Ser Gly Gly Ala Ala Asp Gly Val Thr Ser Ile Ala Pro Thr  
                   20                                  25                                  30

Ala Val Ala Ser Ser Thr Thr Ala Ala Ser Ile Thr Thr Ala Ala Ser  
           35                                  40                                  45

Ser Met Thr Val Ala Ser Ser Ala Pro Thr Thr Ala Ala Ser Ser Thr  
       50                                  55                                  60

Thr Val Ala Ser Ile Ala Pro Thr Thr Thr Ala Ser Ser Met Thr Ala  
       65                                  70                                  75                                  80

Ala Ser Ser Thr Pro Met Thr Leu Ala Leu Pro Ala Pro Thr Ser Thr  
85 90 95

Xaa Thr Gly Arg Thr Pro Ser Thr Thr Ala Thr Gly His Pro Ser Leu  
100 105 110

Ser Thr Ala Leu Ala Gln Val Pro Lys Ser Ser Ala Leu Pro Arg Thr  
115 120 125

Ala Thr Leu Ala Thr Leu Ala Thr Arg Ala Gln Thr Val Ala Thr Thr  
130 135 140

Ala Asn Thr Ser Ser Pro Met Ser Thr Arg Pro Ser Pro Ser Lys His  
145 150 155 160

Met Pro Ser Asp Thr Ala Ala Ser Pro Val Pro Pro Met Xaa Pro Gln  
165 170 175

Ala Gln Gly Pro Ile Ser Gln Val Ser Val Asp Gln Pro Val Val Asn  
180 185 190

Thr Thr Xaa Lys Ser Thr Xaa Met Pro Ser Asn Thr Thr Xaa Glu Pro  
195 200 205

Leu Thr Gln Ala Val Val Asp Lys Thr Leu Leu Leu Val Val Leu Leu  
210 215 220

Leu Gly Val Thr Leu Phe Ile Thr Val Leu Val Leu Phe Ala Leu Gln  
225 230 235 240

Ala Tyr Glu Ser Tyr Lys Lys Lys Asp Tyr Thr Gln Val Asp Tyr Leu  
245 250 255

Ile Asn Gly Met Tyr Ala Asp Ser Glu Met  
260 265

&lt;210&gt; 323

&lt;211&gt; 99

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 323

Ala Arg Cys Pro Glu Leu Pro Gly Leu Arg Cys Arg Pro Arg Pro Arg  
1 5 10 15

Ala Gly Pro Gln Ala Pro Ser Tyr Cys Pro Arg Ala Thr Arg Pro Pro  
20 25 30

Gly Ala Cys Cys Ala Arg Met Arg Leu Leu Leu Glu Trp Arg Val Tyr  
35 40 45

Leu Arg Leu Thr Cys Ala Thr Lys Asp Gly Met Ala Arg Glu Cys Pro  
50 55 60

Thr Thr Trp Leu Ser Pro Pro Ala Lys Pro Asp Phe Ala Gln Arg His  
65 70 75 80

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<210> 324
<211> 96
<212> PRT
<213> Homo sapiens
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<400> 324
Leu Pro Ala Thr Val Glu Phe Ala Val His Thr Phe Asn Gln Gln Ser
 1             5             10             15

Lys Asp Tyr Tyr Ala Tyr Arg Leu Gly His Ile Leu Asn Ser Trp Lys
          20             25             30

Glu Gln Val Glu Ser Lys Thr Val Phe Ser Met Glu Leu Leu Leu Gly
      35             40             45

Arg Thr Arg Cys Gly Lys Phe Glu Asp Asp Ile Asp Asn Cys His Phe
  50             55             60

Gln Glu Ser Thr Glu Leu Asn Asn Thr Phe Thr Cys Phe Phe Thr Ile
65             70             75             80

Ser Thr Arg Pro Trp Met Thr Gln Phe Ser Leu Leu Asn Lys Thr Cys
          85             90             95

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<210> 325
<211> 166
<212> PRT
<213> Homo sapiens
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<400> 325

Leu Leu Trp Ala Arg Gly Leu Gly Arg Ala Lys Ser Ala Val Pro Thr  
1 5 10 15

Val Ser Thr Met Leu Gly Leu Pro Trp Lys Gly Gly Leu Ser Trp Ala  
20 25 30

Leu Leu Leu Leu Leu Leu Gly Ser Gln Ile Leu Leu Ile Tyr Ala Trp  
35 40 45

His Phe His Glu Gln Arg Asp Cys Asp Glu His Asn Val Met Ala Arg  
50 55 60

Tyr Leu Pro Ala Thr Val Glu Phe Ala Val His Thr Phe Asn Gln Gln  
65 70 75 80

Ser Lys Asp Tyr Tyr Ala Tyr Arg Leu Gly His Ile Leu Asn Ser Trp  
85 90 95

Lys Glu Gln Val Glu Ser Lys Thr Val Phe Ser Met Glu Leu Leu Leu  
                   100                                  105                                  110  
 Gly Arg Thr Arg Cys Gly Lys Phe Glu Asp Asp Ile Asp Asn Cys His  
                   115                                  120                                  125  
 Phe Gln Glu Ser Thr Glu Leu Asn Asn Thr Phe Thr Cys Phe Phe Thr  
                   130                                  135                                  140  
 Ile Ser Thr Arg Pro Trp Met Thr Gln Phe Ser Leu Leu Asn Lys Thr  
                   145                                  150                                  155                                  160  
 Cys Leu Glu Gly Phe His  
                                   165

<210> 326  
 <211> 214  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (200)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (205)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 326  
 Leu Glu Gln Lys Leu Glu Leu His Arg Gly Gly Gly Arg Ser Arg Thr  
   1                                  5                                  10                                  15  
 Ser Gly Ser Pro Gly Leu Gln Glu Phe Gly Thr Arg Glu Glu Arg Gly  
                   20                                  25                                  30  
 Glu Gly Glu Gln Arg Thr Gly Arg Glu Phe Ser Gly Asn Gly Gly Arg  
                   35                                  40                                  45  
 Ala Val Glu Ala Ala Arg Met Arg Leu Leu Cys Gly Leu Trp Leu Trp  
                   50                                  55                                  60  
 Leu Ser Leu Leu Lys Val Leu Gln Ala Gln Thr Pro Thr Pro Leu Pro  
                   65                                  70                                  75                                  80  
 Leu Pro Pro Pro Met Gln Ser Phe Gln Gly Asn Gln Phe Gln Gly Glu  
                                   85                                  90                                  95  
 Trp Phe Val Leu Gly Leu Ala Gly Asn Ser Phe Arg Pro Glu His Arg  
                   100                                  105                                  110  
 Ala Leu Leu Asn Ala Phe Thr Ala Thr Phe Glu Leu Ser Asp Asp Gly  
                   115                                  120                                  125  
 Arg Phe Glu Val Trp Asn Ala Met Thr Arg Gly Gln His Cys Asp Thr  
                   130                                  135                                  140

Trp Ser Tyr Val Leu Ile Pro Ala Ala Gln Pro Gly Gln Phe Thr Val  
145 150 155 160

Asp His Gly Val Gly Arg Ser Trp Leu Leu Pro Pro Gly Thr Leu Asp  
165 170 175

Gln Phe Ile Cys Leu Gly Arg Ala Gln Gly Leu Ser Asp Asp Asn Ile  
180 185 190

Val Phe Pro Asp Val Thr Gly Xaa Ala Leu Asp Leu Xaa Ser Leu Pro  
195 200 205

Trp Val Ala Ala Pro Ala  
210

<210> 327

<211> 181

<212> PRT

<213> Homo sapiens

<400> 327

Met Cys Val Cys Glu Arg Lys Arg Gly Arg Glu Lys Glu Gly Gly Val  
1 5 10 15

Thr Pro Thr Met Thr Ser Asn Phe Pro Phe Cys Thr Leu Ile Leu Gly  
20 25 30

Ile Ala Gln Ala Gln Ala Cys Pro Gly Cys Pro Gly Asp Trp Pro Gly  
35 40 45

Leu Gly Ser Gly Val Gly Glu Gly Leu His His Ile Arg Thr Cys Arg  
50 55 60

Thr Pro Ile Pro Cys Ser Pro Pro Ala Pro Ala Ala Ala Cys Leu Gly  
65 70 75 80

Ser Gly His Ala Arg Leu Pro Cys Val Leu Arg Leu Trp Pro Val Pro  
85 90 95

Ala Asn Leu Ser Ser Pro Phe Arg Leu Glu Ala Leu His Cys Ser Phe  
100 105 110

Trp Ser Ser Pro Leu Leu Pro Ala Pro His Leu Ala Phe Phe Gly Phe  
115 120 125

Arg Asp Leu Leu Thr Asp Phe Leu Leu Ala Ala Cys Leu Leu Thr Phe  
130 135 140

Gln Lys Thr Pro Leu Glu Leu Pro Met Ala Val Val His Leu Leu Val  
145 150 155 160

Ala Thr Pro Cys Tyr Gln Met Leu Asp Asn Leu Pro Leu Pro Ser Ala  
165 170 175

Ala Ala Asn Trp Cys  
180

220

<210> 328  
 <211> 195  
 <212> PRT  
 <213> Homo sapiens

<400> 328  
 Tyr Leu Trp Gly Arg Pro Arg Leu Arg Met Arg Ala Gly Thr Ser Pro  
   1                  5                  10                  15  
 Ser Ala Pro Trp Gly Glu Lys Arg Glu Lys Leu Gly His Lys Leu Pro  
                   20                  25                  30  
 Val Ala Leu Gln Gly Tyr His Pro Trp Ile Leu Leu Glu Cys Thr Val  
           35                  40                  45  
 Phe Trp Ala Arg Val Val Leu Ala Cys Phe Ser Leu Tyr Leu Ile Arg  
   50                  55                  60  
 Gly Pro Asn Cys Ile Asn Arg Gln Pro Glu Pro Thr Tyr Gln Lys Ala  
   65                  70                  75                  80  
 Cys Asn Leu Asp Cys Ser Ser Asp Phe Gly Gln Glu Arg Ala Pro Ala  
                   85                  90                  95  
 Trp Glu Leu Leu Gly Pro Glu Ser Glu Gln Arg Leu Arg Glu Tyr Thr  
           100                  105                  110  
 Ala Gln Gly Leu Gln Ser Leu Ala Ser Ser His Arg Trp Arg Gln Phe  
           115                  120                  125  
 Lys Thr Glu Gly Lys Met Arg Gly Gly Ala Ser Pro Leu Pro Trp Leu  
   130                  135                  140  
 Ile Cys Phe Trp Leu Cys Ser Tyr Lys Gly Ser Asp Asn Ser Leu Lys  
 145                  150                  155                  160  
 Pro Val Val Pro Gly Pro Thr Leu Cys Pro Gln Ser Leu Val Ser Pro  
           165                  170                  175  
 Ser Val His Pro Ser Thr Arg Ser Ala Ser Leu Gly Arg His Arg Ala  
   180                  185                  190  
 Glu Ala Ala  
   195

<210> 329  
 <211> 50  
 <212> PRT  
 <213> Homo sapiens

<400> 329  
 Met Pro Gly Ile Leu Ala Gly Ile Pro Val Lys Asp Leu Cys Leu Ser  
   1                  5                  10                  15  
 Leu Leu Gln Gly Phe Arg Leu Leu Leu Leu Cys Val Cys Pro Gly Trp  
           20                  25                  30  
 Leu Ser Gly Trp Met Gly Gly Gln Lys Gly Ser Pro Arg Ile Val Asp

35 40 45

Ile Gly  
50

<210> 330  
<211> 90  
<212> PRT  
<213> Homo sapiens

<400> 330  
Ala Lys Gly Glu Glu Arg Lys Glu Ala Phe Ser Leu Lys Met Val Gln  
1 5 10 15  
Leu Ser Ser Glu Pro Ile Ser Phe Gly Leu Met Tyr Leu Tyr Leu Gly  
20 25 30  
Val Phe Phe His Leu Ile Tyr Pro Gly Ala Leu Ser Ile Thr Thr Leu  
35 40 45  
Gly Lys His Ser His Pro Phe Phe Thr Ala Glu Gln Asn Ser Thr Val  
50 55 60  
Trp Met Glu His Thr Leu Phe His Gln Ser Pro Val Ala Ser His Leu  
65 70 75 80  
Val Cys Phe Gln Ser Phe Ala Phe Ser Glu  
85 90

<210> 331  
<211> 56  
<212> PRT  
<213> Homo sapiens

<400> 331  
Gly Pro Ala His Pro Ala Ser Pro Pro Leu Met Thr Leu Ser Leu Gln  
1 5 10 15  
Leu Ala Glu Leu Val His Phe Val Cys Ala Phe Gln Ser Gln Trp Thr  
20 25 30  
Gly Val Tyr Pro Met Met Pro Pro Leu Lys Pro Thr Glu Pro Leu Cys  
35 40 45  
Phe Ala Cys Val Pro Cys Arg Val  
50 55

<210> 332  
<211> 18  
<212> PRT  
<213> Homo sapiens

<400> 332  
Met Leu Leu Glu Val Tyr Gly Asp Ser Ile Ser Val Thr Val Ala Ile  
1 5 10 15

Pro Leu

&lt;210&gt; 333

&lt;211&gt; 19

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 333

Met His Ser Pro Cys Gln Ser Lys Ala Ala Asp Gly Leu Gly Lys Ser  
 1 5 10 15

Glu Thr Glu

&lt;210&gt; 334

&lt;211&gt; 10

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 334

Met Leu Lys Ser Leu Gly Leu Ser Thr Asn  
 1 5 10

&lt;210&gt; 335

&lt;211&gt; 200

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 335

Ala Gln Arg Leu Ala Glu Glu Cys Phe Tyr Met Leu Leu Glu Val Tyr  
 1 5 10 15

Gly Asp Ser Ile Ser Val Thr Val Ala Ile Pro Leu Met His Ser Pro  
 20 25 30

Cys Gln Ser Lys Ala Ala Asp Gly Leu Gly Lys Ser Glu Thr Glu Met  
 35 40 45

Leu Lys Ser Leu Gly Leu Ser Thr Asn Met Ser Pro Phe His Leu Leu  
 50 55 60

Gly Leu Lys Val Phe Leu Thr Trp Ala Leu Thr Leu Ala Gln Ile Cys  
 65 70 75 80

Leu Tyr Phe Phe Glu Val Gln Pro Leu Gly Leu Leu Ala Leu Asn Phe  
 85 90 95

Phe Cys Thr Ala Thr Ala Gly Leu Lys Glu Leu Cys Met His Pro Pro  
 100 105 110

Ser Leu Ala Phe Thr Pro Glu Phe His Thr Ser Leu Ser Pro Leu Ala  
 115 120 125

Ile Pro Ser Phe Cys Gly Thr Ser Val Ser Leu Ser Asn Ser His Thr  
 130 135 140



Ile Pro Leu Ser Leu Tyr Leu Pro Phe Pro Ser Lys Ser Arg Met Pro  
 145 150 155 160

Asp Thr Leu His Leu Leu Val His Ser Leu Pro Leu Val His Ser Gln  
 165 170 175

Val Leu Pro Val Lys Asp Val Thr Ile Glu Trp Pro Leu Cys Gln Arg  
 180 185 190

Cys Leu Gly Ser Thr Cys His Gln  
 195 200

<210> 336

<211> 99

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (94)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (99)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 336

Trp Ile Pro Arg Ala Ala Gly Ile Arg His Glu Val Gln Val Ser Leu  
 1 5 10 15

Phe Gln Met Phe Cys Phe Ser Ser Ile Phe Cys Ser His Glu His Thr  
 20 25 30

His Leu Pro Gly Thr Phe Trp Leu Phe Leu Phe Leu Phe Leu Ile Leu  
 35 40 45

Pro Pro Ser Cys Pro Cys Phe Leu Pro Phe Ser Leu Ala Ile Glu Thr  
 50 55 60

Val Arg Trp Pro Cys Trp His His Pro Thr Ser Phe Glu Leu Cys Tyr  
 65 70 75 80

Pro Gly Thr Ser Ile Tyr Tyr Ala Ser Arg Gly Gly Pro Xaa Pro Asn  
 85 90 95

Ser Glu Xaa

<210> 337

<211> 96

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

&lt;222&gt; (1)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (3)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 337

Xaa Asn Xaa Lys Ser Pro Leu Thr Ile Gly Asn Lys Ser Trp Ser Ser  
 1 5 10 15

Thr Ala Val Ala Ala Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg  
 20 25 30

Asn Ser Ala Arg Asp Ser Pro Glu Leu Val His Leu Gly Lys Gly Arg  
 35 40 45

Pro Arg Lys Leu Met Thr Tyr Leu Phe Cys Ser Ser Ile Ser Leu Leu  
 50 55 60

Leu Leu Lys Val His Ser Ser Gly His Gln Asp Ile Arg Lys Ala Lys  
 65 70 75 80

Ser Lys Val Pro Arg Leu Leu Ile Ile Gln Cys Pro Gln Gln Arg Glu  
 85 90 95

&lt;210&gt; 338

&lt;211&gt; 54

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 338

Gly Pro Glu Glu Asn Leu Ser Pro Ser Thr Pro Ser Gln Met Pro Thr  
 1 5 10 15

Ile Trp Val Lys Leu Cys Leu Leu Gln Val Cys His Gly Leu Phe Pro  
 20 25 30

Leu Leu Lys His Trp Ser Gln Pro Met Pro Leu Cys Val Thr Leu Ala  
 35 40 45

Pro Val Ser Tyr Trp Leu  
 50

&lt;210&gt; 339

&lt;211&gt; 287

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 339

Pro Arg Val Arg Lys Glu Pro Glu Ala Met Gln Trp Leu Arg Val Arg  
 1 5 10 15

225

Glu Ser Pro Gly Glu Ala Thr Gly His Arg Val Thr Met Gly Thr Ala  
                   20                                  25                                  30  
 Ala Leu Gly Pro Val Trp Ala Ala Leu Leu Leu Phe Leu Leu Met Cys  
                   35                                  40                                  45  
 Glu Ile Pro Met Val Glu Leu Thr Phe Asp Arg Ala Val Ala Ser Asp  
                   50                                  55                                  60  
 Cys Gln Arg Cys Cys Asp Ser Glu Asp Pro Leu Asp Pro Ala His Val  
                   65                                  70                                  75                                  80  
 Ser Ser Ala Ser Ser Ser Gly Arg Pro His Ala Leu Pro Glu Ile Arg  
                                   85                                  90                                  95  
 Pro Tyr Ile Asn Ile Thr Ile Leu Lys Gly Asp Lys Gly Asp Pro Gly  
                                   100                                  105                                  110  
 Pro Met Gly Leu Pro Gly Tyr Met Gly Arg Glu Gly Pro Gln Gly Glu  
                   115                                  120                                  125  
 Pro Gly Pro Gln Gly Ser Lys Gly Asp Lys Gly Glu Met Gly Ser Pro  
                   130                                  135                                  140  
 Gly Ala Pro Cys Gln Lys Arg Phe Phe Ala Phe Ser Val Gly Arg Lys  
                   145                                  150                                  155                                  160  
 Thr Ala Leu His Ser Gly Glu Asp Phe Gln Thr Leu Leu Phe Glu Arg  
                                   165                                  170                                  175  
 Val Phe Val Asn Leu Asp Gly Cys Phe Asp Met Ala Thr Gly Gln Phe  
                                   180                                  185                                  190  
 Ala Ala Pro Leu Arg Gly Ile Tyr Phe Phe Ser Leu Asn Val His Ser  
                   195                                  200                                  205  
 Trp Asn Tyr Lys Glu Thr Tyr Val His Ile Met His Asn Gln Lys Glu  
                   210                                  215                                  220  
 Ala Val Ile Leu Tyr Ala Gln Pro Ser Glu Arg Ser Ile Met Gln Ser  
                   225                                  230                                  235                                  240  
 Gln Ser Val Met Leu Asp Leu Ala Tyr Gly Asp Arg Val Trp Val Arg  
                                   245                                  250                                  255  
 Leu Phe Lys Arg Gln Arg Glu Asn Ala Ile Tyr Ser Asn Asp Phe Asp  
                   260                                  265                                  270  
 Thr Tyr Ile Thr Phe Ser Gly His Leu Ile Lys Ala Glu Asp Asp  
                   275                                  280                                  285

&lt;210&gt; 340

&lt;211&gt; 339

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 340

Met Leu Tyr Pro Gly Ser Val Tyr Leu Leu Gln Lys Ala Leu Met Pro

226

1	5	10	15
Val Leu Leu Gln Gly Gln Ala Arg Leu Val Glu Glu Cys Asn Gly Arg	20	25	30
Arg Ala Lys Leu Leu Ala Cys Asp Gly Asn Glu Ile Asp Thr Met Phe	35	40	45
Val Asp Arg Arg Gly Thr Ala Glu Pro Gln Gly Gln Lys Leu Val Ile	50	55	60
Cys Cys Glu Gly Asn Ala Gly Phe Tyr Glu Val Gly Cys Val Ser Thr	65	70	75
Pro Leu Glu Ala Gly Tyr Ser Val Leu Gly Trp Asn His Pro Gly Phe	85	90	95
Ala Gly Ser Thr Gly Val Pro Phe Pro Gln Asn Glu Ala Asn Ala Met	100	105	110
Asp Val Val Val Gln Phe Ala Ile His Arg Leu Gly Phe Gln Pro Gln	115	120	125
Asp Ile Ile Ile Tyr Ala Trp Ser Ile Gly Gly Phe Thr Ala Thr Trp	130	135	140
Ala Ala Met Ser Tyr Pro Asp Val Ser Ala Met Ile Leu Asp Ala Ser	145	150	155
Phe Asp Asp Leu Val Pro Leu Ala Leu Lys Val Met Pro Asp Ser Trp	165	170	175
Arg Gly Leu Val Thr Arg Thr Val Arg Gln His Leu Asn Leu Asn Asn	180	185	190
Ala Glu Gln Leu Cys Arg Tyr Gln Gly Pro Val Leu Leu Ile Arg Arg	195	200	205
Thr Lys Asp Glu Ile Ile Thr Thr Thr Val Pro Glu Asp Ile Met Ser	210	215	220
Asn Arg Gly Asn Asp Leu Leu Leu Lys Leu Leu Gln His Arg Tyr Pro	225	230	235
Arg Val Met Ala Glu Glu Gly Leu Arg Val Val Arg Gln Trp Leu Glu	245	250	255
Ala Ser Ser Gln Leu Glu Glu Ala Ser Ile Tyr Ser Arg Trp Glu Val	260	265	270
Glu Glu Asp Trp Cys Leu Ser Val Leu Arg Ser Tyr Gln Ala Glu His	275	280	285
Gly Pro Asp Phe Pro Trp Ser Val Gly Glu Asp Met Ser Ala Asp Gly	290	295	300
Arg Arg Gln Leu Ala Leu Phe Leu Ala Arg Lys His Leu His Asn Phe	305	310	315
			320

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<210> 341
<211> 127
<212> PRT
<213> Homo sapiens
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Val	Cys	Pro	Lys	Trp	Cys	Arg	Phe	Leu	Thr	Met	Leu	Gly	His	Cys	Cys
1				5					10					15	

Tyr Phe Trp Gln Val Trp Pro Ala Ser Glu Ala Leu Ala Ala Gly Pro  
20 25 30

Thr Pro Ser Thr Gly Ser Ser Ser Pro Ser Trp Lys Gln His Ile Gly  
35 40 45

Thr Ser Leu Gln Lys Thr Arg Gly Ser Leu Pro Thr Thr Thr Leu Thr  
50 55 60

Ser Gly Ala Gly Gln Ser Thr Ser Thr Gly Lys Asn Pro Ala Ala Gly  
65 70 75 80

Arg Ser Leu Glu Gly Ala Leu Pro Ala Gly Val Trp Pro Cys Phe Ala  
85 90 95

Gln Ser Pro Cys Thr Gly Gly Gln Gln Thr Pro Ser Ser Thr Gly Leu  
100 105 110

Arg Ser Cys Leu Val Arg Ser Pro Ala Thr Trp Trp Arg Thr Pro  
115 120 125

```
<210> 342
<211> 554
<212> PRT
<213> Homo sapiens
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<220>
<221> SITE
<222> (16)
<223> Xaa equals any of the naturally occurring L-amino acids
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<220>
<221> SITE
<222> (109)
<223> Xaa equals any of the naturally occurring L-amino acids
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Trp Ile Pro Arg Ala Ala Gly Ile Arg His Glu Ile Tyr Arg Glu Xaa  
1 5 10 15

Asp Ser Glu Arg Ala Pro Ala Ser Val Pro Glu Thr Pro Thr Ala Val  
20 25 30

Thr Ala Pro His Ser Ser Ser Trp Asp Thr Tyr Tyr Gln Pro Arg Ala  
 35 40 45  
 Leu Glu Lys His Ala Asp Ser Ile Leu Ala Leu Ala Ser Val Phe Trp  
 50 55 60  
 Ser Ile Ser Tyr Tyr Ser Ser Pro Phe Ala Phe Phe Tyr Leu Tyr Arg  
 65 70 75 80  
 Lys Gly Tyr Leu Ser Leu Ser Lys Val Val Pro Phe Ser His Tyr Ala  
 85 90 95  
 Gly Thr Leu Leu Leu Leu Leu Ala Gly Val Ala Cys Xaa Arg Gly Ile  
 100 105 110  
 Gly Arg Trp Thr Asn Pro Gln Tyr Arg Gln Phe Ile Thr Ile Leu Glu  
 115 120 125  
 Ala Thr His Arg Asn Gln Ser Ser Glu Asn Lys Arg Gln Leu Ala Asn  
 130 135 140  
 Tyr Asn Phe Asp Phe Arg Ser Trp Pro Val Asp Phe His Trp Glu Glu  
 145 150 155 160  
 Pro Ser Ser Arg Lys Glu Ser Arg Gly Gly Pro Ser Arg Arg Gly Val  
 165 170 175  
 Ala Leu Leu Arg Pro Glu Pro Leu His Arg Gly Thr Ala Asp Thr Leu  
 180 185 190  
 Leu Asn Arg Val Lys Lys Leu Pro Cys Gln Ile Thr Ser Tyr Leu Val  
 195 200 205  
 Ala His Thr Leu Gly Arg Arg Met Leu Tyr Pro Gly Ser Val Tyr Leu  
 210 215 220  
 Leu Gln Lys Ala Leu Met Pro Val Leu Leu Gln Gly Gln Ala Arg Leu  
 225 230 235 240  
 Val Glu Glu Cys Asn Gly Arg Arg Ala Lys Leu Leu Ala Cys Asp Gly  
 245 250 255  
 Asn Glu Ile Asp Thr Met Phe Val Asp Arg Arg Gly Thr Ala Glu Pro  
 260 265 270  
 Gln Gly Gln Lys Leu Val Ile Cys Cys Glu Gly Asn Ala Gly Phe Tyr  
 275 280 285  
 Glu Val Gly Cys Val Ser Thr Pro Leu Glu Ala Gly Tyr Ser Val Leu  
 290 295 300  
 Gly Trp Asn His Pro Gly Phe Ala Gly Ser Thr Gly Val Pro Phe Pro  
 305 310 315 320  
 Gln Asn Glu Ala Asn Ala Met Asp Val Val Val Gln Phe Ala Ile His  
 325 330 335  
 Arg Leu Gly Phe Gln Pro Gln Asp Ile Ile Ile Tyr Ala Trp Ser Ile

340                                      345                                      350  
 Gly Gly Phe Thr Ala Thr Trp Ala Ala Met Ser Tyr Pro Asp Val Ser  
       355                                      360                                      365  
 Ala Met Ile Leu Asp Ala Ser Phe Asp Asp Leu Val Pro Leu Ala Leu  
       370                                      375                                      380  
 Lys Val Met Pro Asp Ser Trp Arg Gly Leu Val Thr Arg Thr Val Arg  
       385                                      390                                      395                                      400  
 Gln His Leu Asn Leu Asn Asn Ala Glu Gln Leu Cys Arg Tyr Gln Gly  
                                     405                                      410                                      415  
 Pro Val Leu Leu Ile Arg Arg Thr Lys Asp Glu Ile Ile Thr Thr Thr  
                                     420                                      425                                      430  
 Val Pro Glu Asp Ile Met Ser Asn Arg Gly Asn Asp Leu Leu Leu Lys  
                                     435                                      440                                      445  
 Leu Leu Gln His Arg Tyr Pro Arg Val Met Ala Glu Glu Gly Leu Arg  
                                     450                                      455                                      460  
 Val Val Arg Gln Trp Leu Glu Ala Ser Ser Gln Leu Glu Glu Ala Ser  
       465                                      470                                      475                                      480  
 Ile Tyr Ser Arg Trp Glu Val Glu Glu Asp Trp Cys Leu Ser Val Leu  
                                     485                                      490                                      495  
 Arg Ser Tyr Gln Ala Glu His Gly Pro Asp Phe Pro Trp Ser Val Gly  
                                     500                                      505                                      510  
 Glu Asp Met Ser Ala Asp Gly Arg Arg Gln Leu Ala Leu Phe Leu Ala  
                                     515                                      520                                      525  
 Arg Lys His Leu His Asn Phe Glu Ala Thr His Cys Thr Pro Leu Pro  
                                     530                                      535                                      540  
 Ala Gln Asn Phe Gln Met Pro Trp His Leu  
       545                                      550

&lt;210&gt; 343

&lt;211&gt; 225

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (5)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 343

His Glu Arg Ala Xaa Gly Pro Ser Arg Gly His Gly Glu Leu Leu Ser  
       1                                      5                                      10                                      15

Cys Val Leu Gly Pro Arg Leu Tyr Lys Ile Tyr Arg Glu Arg Asp Ser  
                                     20                                      25                                      30

Glu Arg Ala Pro Ala Ser Val Pro Glu Thr Pro Thr Ala Val Thr Ala  
           35                          40                          45  
 Pro His Ser Ser Ser Trp Asp Thr Tyr Tyr Gln Pro Arg Ala Leu Glu  
           50                          55                          60  
 Lys His Ala Asp Ser Ile Leu Ala Leu Ala Ser Val Phe Trp Ser Ile  
           65                          70                          75                          80  
 Ser Tyr Tyr Ser Ser Pro Phe Ala Phe Phe Tyr Leu Tyr Arg Lys Gly  
                           85                          90                          95  
 Tyr Leu Ser Leu Ser Lys Val Val Pro Phe Ser His Tyr Ala Gly Thr  
                           100                          105                          110  
 Leu Leu Leu Leu Leu Ala Gly Val Ala Cys Ser Glu Ala Leu Ala Ala  
           115                          120                          125  
 Gly Pro Thr Pro Ser Thr Gly Ser Ser Ser Pro Ser Trp Lys Gln His  
           130                          135                          140  
 Ile Gly Thr Ser Leu Gln Lys Thr Arg Gly Ser Leu Pro Thr Thr Thr  
           145                          150                          155                          160  
 Leu Thr Ser Gly Ala Gly Gln Ser Thr Ser Thr Gly Lys Asn Pro Ala  
                           165                          170                          175  
 Ala Gly Arg Ser Leu Glu Gly Ala Leu Pro Ala Gly Val Trp Pro Cys  
                           180                          185                          190  
 Phe Ala Gln Ser Pro Cys Thr Gly Gly Gln Gln Thr Pro Ser Ser Thr  
           195                          200                          205  
 Gly Leu Arg Ser Cys Leu Val Arg Ser Pro Ala Thr Trp Trp Arg Thr  
           210                          215                          220  
 Pro  
 225

<210> 344  
 <211> 299  
 <212> PRT  
 <213> Homo sapiens

<400> 344  
 Met Phe Lys Arg His Gln Arg Leu Lys Lys Asp Ser Thr Gln Ala Glu  
   1                          5                          10                          15  
 Glu Asp Leu Ser Glu Gln Glu Gln Asn Gln Leu Asn Val Leu Lys Lys  
           20                          25                          30  
 His Gly Tyr Val Val Gly Arg Val Gly Arg Thr Phe Leu Tyr Ser Glu  
           35                          40                          45  
 Glu Gln Lys Asp Asn Ile Pro Phe Glu Phe Asp Ala Asp Ser Leu Ala  
           50                          55                          60  
 Phe Asp Met Glu Asn Asp Pro Val Met Gly Thr His Lys Ser Thr Lys



65	70	75	80
Gln Val Glu Leu Thr Ala Gln Asp Val Lys Asp Ala His Trp Phe Tyr	85	90	95
Asp Thr Pro Gly Ile Thr Lys Glu Asn Cys Ile Leu Asn Leu Leu Thr	100	105	110
Glu Lys Glu Val Asn Ile Val Leu Pro Thr Gln Ser Ile Val Pro Arg	115	120	125
Thr Phe Val Leu Lys Pro Gly Met Val Leu Phe Leu Gly Ala Ile Gly	130	135	140
Arg Ile Asp Phe Leu Gln Gly Asn Gln Ser Ala Trp Phe Thr Val Val	145	150	155
Ala Ser Asn Ile Leu Pro Val His Ile Thr Ser Leu Asp Arg Ala Asp	165	170	175
Ala Leu Tyr Gln Lys His Ala Gly His Thr Leu Leu Gln Ile Pro Met	180	185	190
Gly Gly Lys Glu Arg Met Ala Gly Phe Pro Pro Leu Val Ala Glu Asp	195	200	205
Ile Met Leu Lys Glu Gly Leu Gly Ala Ser Glu Ala Val Ala Asp Ile	210	215	220
Lys Phe Ser Ser Ala Gly Trp Val Ser Val Thr Pro Asn Phe Lys Asp	225	230	235
Arg Leu His Leu Arg Gly Tyr Thr Pro Glu Gly Thr Val Leu Thr Val	245	250	255
Arg Pro Pro Leu Leu Pro Tyr Ile Val Asn Ile Lys Gly Gln Arg Ile	260	265	270
Lys Lys Ser Val Ala Tyr Lys Thr Lys Lys Pro Pro Ser Leu Met Tyr	275	280	285
Asn Val Arg Lys Lys Lys Gly Lys Ile Asn Val	290	295	

&lt;210&gt; 345

&lt;211&gt; 314

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (147)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (211)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 345

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Met Leu Pro Ala Arg Leu Pro Phe Arg Leu Leu Ser Leu Phe Leu Arg
 1             5             10             15

Gly Ser Ala Pro Thr Ala Ala Arg His Gly Leu Arg Glu Pro Leu Leu
      20             25             30

Glu Arg Arg Cys Ala Ala Ala Ser Ser Phe Gln His Ser Ser Ser Leu
      35             40             45

Gly Arg Glu Leu Pro Tyr Asp Pro Val Asp Thr Glu Gly Phe Gly Glu
      50             55             60

Gly Gly Asp Met Gln Glu Arg Phe Leu Phe Pro Glu Tyr Ile Leu Asp
      65             70             75             80

Pro Glu Pro Gln Pro Thr Arg Glu Lys Gln Leu Gln Glu Leu Gln Gln
      85             90             95

Gln Gln Glu Glu Glu Glu Arg Gln Arg Gln Gln Arg Arg Glu Glu Arg
      100             105             110

Arg Gln Gln Asn Leu Arg Ala Arg Ser Arg Glu His Pro Val Val Gly
      115             120             125

His Pro Asp Pro Ala Leu Pro Pro Ser Gly Val Asn Cys Ser Gly Cys
      130             135             140

Gly Ala Xaa Leu His Cys Gln Asp Ala Gly Val Pro Gly Tyr Leu Pro
      145             150             155             160

Arg Glu Lys Phe Leu Arg Thr Ala Glu Ala Asp Gly Gly Leu Ala Arg
      165             170             175

Thr Val Cys Gln Arg Cys Trp Leu Leu Ser His His Arg Arg Ala Leu
      180             185             190

Arg Leu Gln Val Ser Arg Glu Gln Tyr Leu Glu Leu Val Ser Ala Ala
      195             200             205

Leu Arg Xaa Pro Gly Pro Ser Leu Val Leu Tyr Met Val Asp Leu Leu
      210             215             220

Asp Leu Pro Asp Ala Leu Leu Pro Asp Leu Pro Ala Leu Val Gly Pro
      225             230             235             240

Lys Gln Leu Ile Val Leu Gly Asn Lys Val Asp Leu Leu Pro Gln Asp
      245             250             255

Ala Pro Gly Tyr Arg Gln Arg Leu Arg Glu Arg Leu Trp Glu Asp Cys
      260             265             270

Ala Arg Ala Gly Leu Leu Leu Ala Pro Gly Thr Lys Gly His Ser Ala
      275             280             285

Pro Ser Arg Thr Ser His Arg Thr Gly Arg Ile Arg Ile Arg Arg Thr
      290             295             300

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Gly Pro Ala Gln Trp Ser Gly Thr Cys Gly  
305 310

<210> 346  
<211> 380  
<212> PRT  
<213> Homo sapiens

<400> 346  
Pro Ser Phe Arg Arg Glu Arg Val Glu Thr Gly Gly Gly Gly Pro Val  
1 5 10 15

Thr His Gly Thr Glu Gly Pro Phe Leu Pro Leu Pro Gly Gly Thr Arg  
20 25 30

Met Asn Met Thr Gln Ala Arg Val Leu Val Ala Ala Val Val Gly Leu  
35 40 45

Val Ala Val Leu Leu Tyr Ala Ser Ile His Lys Ile Glu Glu Gly His  
50 55 60

Leu Ala Val Tyr Tyr Arg Gly Gly Ala Leu Leu Thr Ser Pro Ser Gly  
65 70 75 80

Pro Gly Tyr His Ile Met Leu Pro Phe Ile Thr Thr Phe Arg Ser Val  
85 90 95

Gln Thr Thr Leu Gln Thr Asp Glu Val Lys Asn Val Pro Cys Gly Thr  
100 105 110

Ser Gly Gly Val Met Ile Tyr Ile Asp Arg Ile Glu Val Val Asn Met  
115 120 125

Leu Ala Pro Tyr Ala Val Phe Asp Ile Val Arg Asn Tyr Thr Ala Asp  
130 135 140

Tyr Asp Lys Thr Leu Ile Phe Asn Lys Ile His His Glu Leu Asn Gln  
145 150 155 160

Phe Cys Ser Ala His Thr Leu Gln Glu Val Tyr Ile Glu Leu Phe Asp  
165 170 175

Gln Ile Asp Glu Asn Leu Lys Gln Ala Leu Gln Lys Asp Leu Asn Leu  
180 185 190

Met Ala Pro Gly Leu Thr Ile Gln Ala Val Arg Val Thr Lys Pro Lys  
195 200 205

Ile Pro Glu Ala Ile Arg Arg Asn Phe Glu Leu Met Glu Ala Glu Lys  
210 215 220

Thr Lys Leu Leu Ile Ala Ala Gln Lys Gln Lys Val Val Glu Lys Glu  
225 230 235 240

Ala Glu Thr Glu Arg Lys Lys Ala Val Ile Glu Ala Glu Lys Ile Ala  
245 250 255

Gln Val Ala Lys Ile Arg Phe Gln Gln Lys Val Met Glu Lys Glu Thr

260                      265                      270  
 Glu Lys Arg Ile Ser Glu Ile Glu Asp Ala Ala Phe Leu Ala Arg Glu  
     275                      280                      285  
 Lys Ala Lys Ala Asp Ala Glu Tyr Tyr Ala Ala His Lys Tyr Ala Thr  
     290                      295                      300  
 Ser Asn Lys His Lys Leu Thr Pro Glu Tyr Leu Glu Leu Lys Lys Tyr  
     305                      310                      315                      320  
 Gln Ala Ile Ala Ser Asn Ser Lys Ile Tyr Phe Gly Ser Asn Ile Pro  
     325                      330                      335  
 Asn Met Phe Val Asp Ser Ser Cys Ala Leu Lys Tyr Ser Asp Ile Arg  
     340                      345                      350  
 Thr Gly Arg Glu Ser Ser Leu Pro Ser Lys Glu Ala Leu Glu Pro Ser  
     355                      360                      365  
 Gly Glu Asn Val Ile Gln Asn Lys Glu Ser Thr Gly  
     370                      375                      380  
  
 <210> 347  
 <211> 422  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> SITE  
 <222> (328)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
  
 <400> 347  
 Trp Ser Thr Gly Asn Ala Ser Trp Glu Lys Lys Asp Asn Phe Ile Leu  
     1                      5                      10                      15  
 Ser Ala Asp Phe Glu Met Met Gly Leu Gly Asn Gly Arg Arg Ser Met  
     20                      25                      30  
 Lys Ser Pro Pro Leu Val Leu Ala Ala Leu Val Ala Cys Ile Ile Val  
     35                      40                      45  
 Leu Gly Phe Asn Tyr Trp Ile Ala Ser Ser Arg Ser Val Asp Leu Gln  
     50                      55                      60  
 Thr Arg Ile Met Glu Leu Glu Gly Arg Val Arg Arg Arg Ala Ala Glu  
     65                      70                      75                      80  
 Arg Gly Ala Val Glu Leu Lys Lys Asn Glu Phe Gln Gly Glu Leu Glu  
     85                      90                      95  
 Lys Gln Arg Glu Gln Leu Asp Lys Ile Gln Ser Ser His Asn Phe Gln  
     100                      105                      110  
 Leu Glu Ser Val Asn Lys Leu Tyr Gln Asp Glu Lys Ala Val Leu Val  
     115                      120                      125

Asn Asn Ile Thr Thr Gly Glu Arg Leu Ile Arg Val Leu Gln Asp Gln  
 130 135 140  
 Leu Lys Thr Leu Gln Arg Asn Tyr Gly Arg Leu Gln Gln Asp Val Leu  
 145 150 155 160  
 Gln Phe Gln Lys Asn Gln Thr Asn Leu Glu Arg Lys Phe Ser Tyr Asp  
 165 170 175  
 Leu Ser Gln Cys Ile Asn Gln Met Lys Glu Val Lys Glu Gln Cys Glu  
 180 185 190  
 Glu Arg Ile Glu Glu Val Thr Lys Lys Gly Asn Glu Ala Val Ala Ser  
 195 200 205  
 Arg Asp Leu Ser Glu Asn Asn Asp Gln Arg Gln Gln Leu Gln Ala Leu  
 210 215 220  
 Ser Glu Pro Gln Pro Arg Leu Gln Ala Ala Gly Leu Pro His Thr Glu  
 225 230 235 240  
 Val Pro Gln Gly Lys Gly Asn Val Leu Gly Asn Ser Lys Ser Gln Thr  
 245 250 255  
 Pro Ala Pro Ser Ser Glu Val Val Leu Asp Ser Lys Arg Gln Val Glu  
 260 265 270  
 Lys Glu Glu Thr Asn Glu Ile Gln Val Val Asn Glu Glu Pro Gln Arg  
 275 280 285  
 Asp Arg Leu Pro Gln Glu Pro Gly Arg Glu Gln Val Val Glu Asp Arg  
 290 295 300  
 Pro Val Gly Gly Arg Gly Phe Gly Gly Ala Gly Glu Leu Gly Gln Thr  
 305 310 315 320  
 Pro Gln Val Gln Ala Ala Leu Xaa Val Ser Gln Glu Asn Pro Glu Met  
 325 330 335  
 Glu Gly Pro Glu Arg Asp Gln Leu Val Ile Pro Asp Gly Gln Glu Glu  
 340 345 350  
 Glu Gln Glu Ala Ala Gly Glu Gly Arg Asn Gln Gln Lys Leu Arg Gly  
 355 360 365  
 Glu Asp Asp Tyr Asn Met Asp Glu Asn Glu Ala Glu Ser Glu Thr Asp  
 370 375 380  
 Lys Gln Ala Ala Leu Ala Gly Asn Asp Arg Asn Ile Asp Val Phe Asn  
 385 390 395 400  
 Val Glu Asp Gln Lys Arg Asp Thr Ile Asn Leu Leu Asp Gln Arg Glu  
 405 410 415  
 Lys Arg Asn His Thr Leu  
 420

&lt;210&gt; 348

236

<211> 14  
 <212> PRT  
 <213> Homo sapiens

<400> 348  
 Ser Leu His Arg Phe Val Leu Ser Gln Ala Lys Asp Glu Leu  
           1                  5                          10

<210> 349  
 <211> 19  
 <212> PRT  
 <213> Homo sapiens

<400> 349  
 Phe Ile Lys Phe Phe Ala Pro Trp Cys Gly His Cys Lys Ala Leu Ala  
           1                  5                          10                          15

Pro Thr Trp

<210> 350  
 <211> 19  
 <212> PRT  
 <213> Homo sapiens

<400> 350  
 Phe Ile Lys Phe Tyr Ala Pro Trp Cys Gly His Cys Lys Thr Leu Ala  
           1                  5                          10                          15

Pro Thr Trp

<210> 351  
 <211> 363  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (42)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 351  
 Arg Arg Gly Arg Gly Val Pro Gly Pro Arg Gly Arg Arg Arg Leu Trp  
           1                  5                          10                          15

Ser Ala Ala Cys Gly His Cys Gln Arg Leu Gln Pro Thr Trp Asn Asp  
                   20                          25                          30

Leu Gly Asp Lys Tyr Asn Ser Met Glu Xaa Ala Lys Val Tyr Val Ala  
           35                          40                          45

Lys Val Asp Cys Thr Ala His Ser Asp Val Cys Ser Ala Gln Gly Val  
           50                          55                          60

Arg Gly Tyr Pro Thr Leu Lys Leu Phe Lys Pro Gly Gln Glu Ala Val

65	70	75	80
Lys Tyr Gln Gly Pro Arg Asp Phe Gln Thr Leu Glu Asn Trp Met Leu	85	90	95
Gln Thr Leu Asn Glu Glu Pro Val Thr Pro Glu Pro Glu Val Glu Pro	100	105	110
Pro Ser Ala Pro Glu Leu Lys Gln Gly Leu Tyr Glu Leu Ser Ala Ser	115	120	125
Asn Phe Glu Leu His Val Ala Gln Gly Asp His Phe Ile Lys Phe Phe	130	135	140
Ala Pro Trp Cys Gly His Cys Lys Ala Leu Ala Pro Thr Trp Glu Gln	145	150	155
Leu Ala Leu Gly Leu Glu His Ser Glu Thr Val Lys Ile Gly Lys Val	165	170	175
Asp Cys Thr Gln His Tyr Glu Leu Cys Ser Gly Asn Gln Val Arg Gly	180	185	190
Tyr Pro Thr Leu Leu Trp Phe Arg Asp Gly Lys Lys Val Asp Gln Tyr	195	200	205
Lys Gly Lys Arg Asp Leu Glu Ser Leu Arg Glu Tyr Val Glu Ser Gln	210	215	220
Leu Gln Arg Thr Glu Thr Gly Ala Thr Glu Thr Val Thr Pro Ser Glu	225	230	235
Ala Pro Val Leu Ala Ala Glu Pro Glu Ala Asp Lys Gly Thr Val Leu	245	250	255
Ala Leu Thr Glu Asn Asn Phe Asp Asp Thr Ile Ala Glu Gly Ile Thr	260	265	270
Phe Ile Lys Phe Tyr Ala Pro Trp Cys Gly His Cys Lys Thr Leu Ala	275	280	285
Pro Thr Trp Glu Glu Leu Ser Lys Lys Glu Phe Pro Gly Leu Ala Gly	290	295	300
Val Lys Ile Ala Glu Val Asp Cys Thr Ala Glu Arg Asn Ile Cys Ser	305	310	315
Lys Tyr Ser Val Arg Gly Tyr Pro Thr Leu Leu Leu Phe Arg Gly Gly	325	330	335
Lys Lys Val Ser Glu His Ser Gly Gly Arg Asp Leu Asp Ser Leu His	340	345	350
Arg Phe Val Leu Ser Gln Ala Lys Asp Glu Leu	355	360	

&lt;210&gt; 352

&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 352

Met Arg Pro Gln Gly Pro Ala Ala Ser Pro Gln Arg Leu Arg Gly Leu  
 1 5 10 15  
 Leu Leu Leu Leu Leu Leu Gln Leu Pro Ala Pro Ser Ser Ala Ser Glu  
 20 25 30  
 Ile Pro Lys Gly Lys Gln Lys Ala His Ser Gly Arg Gly Arg Trp Trp  
 35 40 45  
 Thr Cys Ile Met Glu Cys Ala Tyr Lys Gly Gln Gln Glu Cys Leu Val  
 50 55 60  
 Glu Thr Gly Ala Leu Gly Pro Met Ala Phe Arg Val His Leu Gly Ser  
 65 70 75 80  
 Gln Val Gly Met Asp Ser Lys Glu Lys Arg Gly Asn Val  
 85 90

&lt;210&gt; 353

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (210)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 353

Glu Thr Arg Val Lys Thr Ser Leu Glu Leu Leu Arg Thr Gln Leu Glu  
 1 5 10 15  
 Pro Thr Gly Thr Val Gly Asn Thr Ile Met Thr Ser Gln Pro Val Pro  
 20 25 30  
 Asn Glu Thr Ile Ile Val Leu Pro Ser Asn Val Ile Asn Phe Ser Gln  
 35 40 45  
 Ala Glu Lys Pro Glu Pro Thr Asn Gln Gly Gln Asp Ser Leu Lys Lys  
 50 55 60  
 His Leu His Ala Glu Ile Lys Val Ile Gly Thr Ile Gln Ile Leu Cys  
 65 70 75 80  
 Gly Met Met Val Leu Ser Leu Gly Ile Ile Leu Ala Ser Ala Ser Phe  
 85 90 95  
 Ser Pro Asn Phe Thr Gln Val Thr Ser Thr Leu Leu Asn Ser Ala Tyr  
 100 105 110  
 Pro Phe Ile Gly Pro Phe Phe Phe Ile Ile Ser Gly Ser Leu Ser Ile  
 115 120 125  
 Ala Thr Glu Lys Arg Leu Thr Lys Leu Leu Val His Ser Ser Leu Val



130                      135                      140  
 Gly Ser Ile Leu Ser Ala Leu Ser Ala Leu Val Gly Phe Ile Ile Leu  
 145                      150                      155                      160  
 Ser Val Lys Gln Ala Thr Leu Asn Pro Ala Ser Leu Gln Cys Glu Leu  
                     165                      170                      175  
 Asp Lys Asn Asn Ile Pro Thr Arg Ser Tyr Val Ser Tyr Phe Tyr His  
                     180                      185                      190  
 Asp Ser Leu Tyr Thr Thr Asp Cys Tyr Thr Ala Lys Ala Ser Leu Ala  
                     195                      200                      205  
 Gly Xaa Leu Ser Leu Met Leu Ile Cys Thr Leu Leu Glu Phe Cys Leu  
                     210                      215                      220  
 Ala Val Leu Thr Ala Val Leu Arg Trp Lys Gln Ala Tyr Ser Asp Phe  
 225                      230                      235                      240  
 Pro Gly Ser Val Leu Phe Leu Pro His Ser Tyr Ile Gly Asn Ser Gly  
                     245                      250                      255  
 Met Ser Ser Lys Met Thr His Asp Cys Gly Tyr Glu Glu Leu Leu Thr  
                     260                      265                      270  
 Ser

&lt;210&gt; 354

&lt;211&gt; 192

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (129)

&lt;223&gt; Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 354

Met Met Val Leu Ser Leu Gly Ile Ile Leu Ala Ser Ala Ser Phe Ser  
 1                      5                      10                      15

Pro Asn Phe Thr Gln Val Thr Ser Thr Leu Leu Asn Ser Ala Tyr Pro  
                     20                      25                      30

Phe Ile Gly Pro Phe Phe Phe Ile Ile Ser Gly Ser Leu Ser Ile Ala  
                     35                      40                      45

Thr Glu Lys Arg Leu Thr Lys Leu Leu Val His Ser Ser Leu Val Gly  
                     50                      55                      60

Ser Ile Leu Ser Ala Leu Ser Ala Leu Val Gly Phe Ile Ile Leu Ser  
                     65                      70                      75                      80

Val Lys Gln Ala Thr Leu Asn Pro Ala Ser Leu Gln Cys Glu Leu Asp  
                     85                      90                      95

Lys Asn Asn Ile Pro Thr Arg Ser Tyr Val Ser Tyr Phe Tyr His Asp  
                   100                                  105                                  110  
 Ser Leu Tyr Thr Thr Asp Cys Tyr Thr Ala Lys Ala Ser Leu Ala Gly  
                   115                                  120                                  125  
 Xaa Leu Ser Leu Met Leu Ile Cys Thr Leu Leu Glu Phe Cys Leu Ala  
                   130                                  135                                  140  
 Val Leu Thr Ala Val Leu Arg Trp Lys Gln Ala Tyr Ser Asp Phe Pro  
                   145                                  150                                  155                                  160  
 Gly Ser Val Leu Phe Leu Pro His Ser Tyr Ile Gly Asn Ser Gly Met  
                   165                                  170                                  175  
 Ser Ser Lys Met Thr His Asp Cys Gly Tyr Glu Glu Leu Leu Thr Ser  
                   180                                  185                                  190

<210> 355  
 <211> 204  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (119)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 355  
 Gly Ala Ser Cys Glu Gly Gly Gly Ala Ala Ala Arg Ala Ala Leu Gly  
   1                                  5                                  10                                  15  
 Val His Arg Ser Gln Lys Ala Leu Leu Val Phe Arg Arg Thr Leu Ser  
                   20                                  25                                  30  
 Asn Leu Leu Tyr Met Pro Leu Leu Arg Gly Leu Leu Trp Leu Gln Val  
                   35                                  40                                  45  
 Leu Cys Ala Gly Pro Leu His Thr Glu Ala Val Val Leu Leu Val Pro  
                   50                                  55                                  60  
 Ser Asp Asp Gly Arg Ala Phe Leu Leu Arg Ser Arg Leu Leu His Pro  
   65                                  70                                  75                                  80  
 Glu Ala His Val Pro Pro Ala Ala Asp Arg Gly Ala Ser Leu Gln Cys  
                   85                                  90                                  95  
 Val Leu His Gln Ala Ala Pro Lys Ser Arg Pro Arg Ser Pro Ala Ala  
                   100                                  105                                  110  
 Gly Ala Ala Leu Leu His Xaa Pro Arg Arg Thr Gly Asp Glu Pro Cys  
                   115                                  120                                  125  
 Arg Glu Phe His Gly Asn Gly Phe Pro Gly Pro Thr Gln Leu Thr Pro  
                   130                                  135                                  140

Gly Glu Cys Gly Leu Pro Ala Pro Ser Ser Leu Leu Gln His Ala Ser  
145 150 155 160

Ala Pro Val Arg Thr Gly Ser Glu Gly Gln Val Val Gly Cys Pro Arg  
165 170 175

Ala Arg Gly Glu Thr Gly Glu Gly Leu Ser Leu Ala Phe Leu Ser Ser  
180 185 190

Leu Met Phe Thr Ser Arg Asn Gly Leu Val Gly Cys  
195 200

<210> 356

<211> 72

<212> PRT

<213> Homo sapiens

<400> 356

Met Gly Ser Ala Ala Leu Glu Ile Leu Gly Leu Val Leu Cys Leu Val  
1 5 10 15

Gly Trp Gly Gly Leu Ile Leu Ala Cys Gly Leu Pro Met Trp Gln Val  
20 25 30

Thr Ala Phe Leu Asp His Asn Ile Val Thr Ala Gln Thr Thr Trp Lys  
35 40 45

Gly Leu Trp Met Ser Cys Val Val Gln Ser Thr Gly Thr Cys Ser Ala  
50 55 60

Lys Cys Thr Thr Arg Cys Trp Leu  
65 70

<210> 357

<211> 115

<212> PRT

<213> Homo sapiens

<400> 357

Leu Lys Arg Ala Pro Pro Gly Pro Ala Leu Ala Lys Gly Leu Leu Gln  
1 5 10 15

Pro Ser Ser Thr Phe Gln Ala Leu Glu Thr Asn Ile Gly Asp Gln Val  
20 25 30

Arg Arg His Ser Thr Ala Val Val Ile Arg Glu Met Thr Ser Tyr Ile  
35 40 45

Leu Ile Ser Phe Val Leu Leu Ile Gly Val Gly Cys Ile Glu Lys Asp  
50 55 60

Gln Ser Cys Pro Val Phe Gly Gly Arg Lys Arg Leu His Leu Leu Phe  
65 70 75 80

Val Gly Gly Gln Leu Arg Gln Val Arg Met Leu Arg Gly Glu Leu Ser  
85 90 95

242

Cys Ala Cys Tyr Arg Pro His Val Gln Ala Leu Gln Leu Gly Gly Cys  
                   100                                  105                                  110

Thr Cys Phe  
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<210> 358  
 <211> 88  
 <212> PRT  
 <213> Homo sapiens

<400> 358  
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                   20                                  25                                  30

Leu Ser Ser Leu Phe Pro Leu Leu Pro Ser Val His Ser Val Asn Ile  
           35                                  40                                  45

Ile Ser Cys Leu Leu Leu Ser Lys Cys Phe Glu Gly Leu Glu Leu Met  
       50                                  55                                  60

Cys Glu His Leu Tyr Gln Leu Ser Gln Leu His Val Leu His His Ile  
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Phe Ser Tyr Leu Leu Cys Thr Pro  
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<210> 359  
 <211> 716  
 <212> PRT  
 <213> Homo sapiens

<220>  
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 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
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 <222> (373)  
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<220>  
 <221> SITE  
 <222> (705)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 359  
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Gly Arg Gly Glu Asp Asp Ser Gly Pro Pro Pro Ser Thr Val Ile Asn  
                   20                                  25                                  30

Gln Asn Glu Thr Phe Ala Asn Ile Ile Phe Lys Pro Thr Val Val Gln  
           35                          40                          45  
 Gln Ala Arg Ile Ala Gln Asn Gly Ile Leu Gly Asp Phe Ile Ile Arg  
           50                          55                          60  
 Tyr Asp Val Asn Arg Glu Gln Ser Ile Gly Asp Ile Gln Val Leu Asn  
           65                          70                          75                          80  
 Gly Tyr Phe Val His Tyr Phe Ala Pro Lys Asp Leu Pro Pro Leu Pro  
                           85                          90                          95  
 Lys Asn Val Val Phe Val Leu Asp Ser Ser Ala Ser Met Val Gly Thr  
                           100                          105                          110  
 Lys Leu Arg Gln Thr Lys Asp Ala Leu Phe Thr Ile Leu His Asp Leu  
                           115                          120                          125  
 Arg Pro Gln Asp Arg Phe Ser Ile Ile Gly Phe Ser Asn Arg Ile Lys  
           130                          135                          140  
 Val Trp Lys Asp His Leu Ile Ser Val Thr Pro Asp Ser Ile Arg Asp  
           145                          150                          155                          160  
 Gly Lys Val Tyr Ile His His Met Ser Pro Thr Gly Gly Thr Asp Ile  
                           165                          170                          175  
 Asn Gly Val Leu Gln Arg Ala Ile Arg Leu Leu Asn Lys Tyr Val Ala  
                           180                          185                          190  
 His Ser Gly Ile Gly Asp Arg Ser Val Ser Leu Ile Val Phe Leu Thr  
                           195                          200                          205  
 Asp Gly Lys Pro Thr Val Gly Glu Thr His Thr Leu Lys Ile Leu Asn  
           210                          215                          220  
 Asn Thr Arg Glu Ala Ala Arg Gly Gln Val Cys Ile Phe Thr Ile Gly  
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 Asn Cys Gly Leu Thr Arg Arg Val His Glu Glu Glu Asp Ala Gly Ser  
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           275                          280                          285  
 Ile Arg Ile Asp Tyr Pro Pro Ser Ser Val Val Gln Ala Thr Lys Thr  
           290                          295                          300  
 Leu Phe Pro Asn Tyr Phe Asn Gly Ser Glu Ile Ile Ile Ala Gly Lys  
           305                          310                          315                          320  
 Leu Val Asp Arg Lys Leu Asp His Leu His Val Glu Val Thr Ala Ser  
                           325                          330                          335  
 Asn Ser Lys Lys Phe Ile Ile Leu Lys Thr Asp Val Pro Val Arg Pro

340	345	350
Gln Lys Ala Gly Lys Asp Val Thr Gly Ser Pro Arg Pro Gly Gly Asp 355 360 365		
Gly Glu Gly Asp Xaa Asn His Ile Glu Arg Leu Trp Ser Tyr Leu Thr 370 375 380		
Thr Lys Glu Leu Leu Ser Ser Trp Leu Gln Ser Asp Asp Glu Pro Glu 385 390 395 400		
Lys Glu Arg Leu Arg Gln Arg Ala Gln Ala Leu Ala Val Ser Tyr Arg 405 410 415		
Phe Leu Thr Pro Phe Thr Ser Met Lys Leu Arg Gly Pro Val Pro Arg 420 425 430		
Met Asp Gly Leu Glu Glu Ala His Gly Met Ser Ala Ala Met Gly Pro 435 440 445		
Glu Pro Val Val Gln Ser Val Arg Gly Ala Gly Thr Gln Pro Gly Pro 450 455 460		
Leu Leu Lys Lys Pro Tyr Gln Pro Arg Ile Lys Ile Ser Lys Thr Ser 465 470 475 480		
Val Asp Gly Asp Pro His Phe Val Val Asp Phe Pro Leu Ser Arg Leu 485 490 495		
Thr Val Cys Phe Asn Ile Asp Gly Gln Pro Gly Asp Ile Leu Arg Leu 500 505 510		
Val Ser Asp His Arg Asp Ser Gly Val Thr Val Asn Gly Glu Leu Ile 515 520 525		
Gly Ala Pro Ala Pro Pro Asn Gly His Lys Lys Gln Arg Thr Tyr Leu 530 535 540		
Arg Thr Ile Thr Ile Leu Ile Asn Lys Pro Glu Arg Ser Tyr Leu Glu 545 550 555 560		
Ile Thr Pro Ser Arg Val Ile Leu Asp Gly Gly Asp Arg Leu Val Leu 565 570 575		
Pro Cys Asn Gln Ser Val Val Val Gly Ser Trp Gly Leu Glu Val Ser 580 585 590		
Val Ser Ala Asn Ala Asn Val Thr Val Thr Ile Gln Gly Ser Ile Ala 595 600 605		
Phe Val Ile Leu Ile His Leu Tyr Lys Lys Pro Ala Pro Phe Gln Arg 610 615 620		
His His Leu Gly Phe Tyr Ile Ala Asn Ser Glu Gly Leu Ser Ser Asn 625 630 635 640		
Cys His Gly Leu Leu Gly Gln Phe Leu Asn Gln Asp Ala Arg Leu Thr 645 650 655		

Glu Asp Pro Ala Gly Pro Ser Gln Asn Leu Thr His Pro Leu Leu Leu  
660 665 670

Gln Val Gly Glu Gly Pro Glu Ala Val Leu Thr Val Lys Gly His Gln  
675 680 685

Val Pro Val Val Trp Lys Gln Arg Lys Ile Tyr Asn Gly Glu Glu Gln  
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<210> 360

<211> 387

<212> PRT

<213> Homo sapiens

<400> 360

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20 25 30

Ala Leu Pro Gln Val Val Ala Val Asp Ile Asn Asp Leu Gly Thr Ile  
35 40 45

Lys Leu Ser Leu Glu Val Thr Trp Ser Pro Phe Asp Lys Asp Asp Gln  
50 55 60

Pro Ser Ala Ala Ser Ser Val Asn Lys Ala Ser Thr Val Thr Lys Arg  
65 70 75 80

Phe Ser Thr Tyr Ser Gln Ser Pro Pro Asp Thr Pro Ser Leu Arg Glu  
85 90 95

Gln Ala Phe Tyr Asn Met Leu Arg Arg Gln Glu Glu Leu Glu Asn Gly  
100 105 110

Thr Ala Trp Ser Leu Ser Ser Glu Ser Ser Asp Asp Ser Ser Ser Pro  
115 120 125

Gln Leu Ser Gly Thr Ala Arg His Ser Pro Ala Pro Arg Pro Leu Val  
130 135 140

Gln Gln Pro Glu Pro Leu Pro Ile Gln Val Ala Phe Arg Arg Pro Glu  
145 150 155 160

Thr Pro Ser Ser Gly Pro Leu Asp Glu Glu Gly Ala Val Ala Pro Val  
165 170 175

Leu Ala Asn Gly His Ala Pro Tyr Ser Arg Thr Leu Ser His Ile Ser  
180 185 190

Glu Ala Ser Val Asn Ala Ala Leu Ala Glu Ala Ser Val Glu Ala Val  
195 200 205

Gly Pro Lys Ser Leu Ser Trp Gly Pro Ser Pro Pro Thr His Pro Ala

246

210                      215                      220  
 Pro Thr His Gly Lys His Pro Ser Pro Val Pro Pro Ala Leu Asp Pro  
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 Gly His Ser Ala Thr Ser Ser Thr Leu Gly Thr Thr Gly Ser Val Pro  
                     245                      250                      255  
 Thr Ser Thr Asp Pro Ala Pro Ser Ala His Leu Asp Ser Val His Lys  
                     260                      265                      270  
 Ser Thr Asp Ser Gly Pro Ser Glu Leu Pro Gly Pro Thr His Thr Thr  
                     275                      280                      285  
 Thr Gly Ser Thr Tyr Ser Ala Ile Thr Thr Thr His Ser Ala Pro Ser  
                     290                      295                      300  
 Pro Leu Thr His Thr Thr Thr Gly Ser Thr His Lys Pro Ile Ile Ser  
 305                      310                      315                      320  
 Thr Leu Thr Thr Thr Gly Pro Thr Leu Asn Ile Ile Gly Pro Val Gln  
                     325                      330                      335  
 Thr Thr Thr Ser Pro Thr His Thr Met Pro Ser Pro Ser Ser His Ser  
                     340                      345                      350  
 Asn Ser Pro Gln Tyr Val Asp Phe Cys Ser Ser Val Cys Asp Asn Ile  
                     355                      360                      365  
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                     370                      375                      380  
 Lys Thr Leu  
 385

<210> 361  
 <211> 260  
 <212> PRT  
 <213> Homo sapiens

<400> 361  
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 His Val Val Val Gly Ser Val Ser Cys Glu Thr Lys Asp Leu Phe Ala  
                     20                      25                      30  
 Ala Leu Pro Gln Val Val Ala Val Asp Ile Asn Asp Leu Gly Thr Ile  
                     35                      40                      45  
 Lys Leu Ser Leu Glu Val Thr Trp Ser Pro Phe Asp Lys Asp Asp Gln  
                     50                      55                      60  
 Pro Ser Ala Ala Ser Ser Val Asn Lys Ala Ser Thr Val Thr Lys Arg  
                     65                      70                      75                      80  
 Phe Ser Thr Tyr Ser Gln Ser Pro Pro Asp Thr Pro Ser Leu Arg Glu  
                     85                      90                      95



Gln Ala Phe Tyr Asn Met Leu Arg Arg Gln Glu Glu Leu Glu Asn Gly  
 100 105 110  
 Thr Ala Trp Ser Leu Ser Ser Glu Ser Ser Asp Asp Ser Ser Ser Pro  
 115 120 125  
 Gln Leu Ser Gly Thr Ala Arg His Ser Pro Ala Pro Arg Pro Leu Val  
 130 135 140  
 Gln Gln Pro Glu Pro Leu Pro Ile Gln Val Ala Phe Arg Arg Pro Glu  
 145 150 155 160  
 Thr Pro Ser Ser Gly Pro Leu Asp Glu Glu Gly Ala Val Ala Pro Val  
 165 170 175  
 Leu Ala Asn Gly His Ala Pro Tyr Ser Arg Thr Leu Ser His Ile Ser  
 180 185 190  
 Glu Ala Ser Val Asn Ala Ala Leu Ala Glu Ala Ser Val Glu Ala Val  
 195 200 205  
 Gly Pro Lys Ser Leu Ser Trp Gly Pro Ser Pro Pro Thr His Pro Ala  
 210 215 220  
 Pro Thr His Gly Lys His Pro Ser Pro Val Pro Pro Ala Leu Asp Pro  
 225 230 235 240  
 Gly His Ser Ala Thr Ser Ser Thr Leu Gly Thr Thr Gly Ser Val Pro  
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 Thr Ser Thr Asp  
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<210> 362  
 <211> 155  
 <212> PRT  
 <213> Homo sapiens

<400> 362  
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 Ile Phe Leu Ser Val Tyr Phe Ile Ile Thr Leu Ser Asp Leu Glu Cys  
 35 40 45  
 Asp Tyr Ile Asn Ala Arg Ser Cys Cys Ser Lys Leu Asn Lys Trp Val  
 50 55 60  
 Ile Pro Glu Leu Ile Gly His Thr Ile Val Thr Val Leu Leu Leu Met  
 65 70 75 80  
 Ser Leu His Trp Phe Ile Phe Leu Leu Asn Leu Pro Val Ala Thr Trp  
 85 90 95

Asn Ile Tyr Arg Tyr Ile Met Val Pro Ser Gly Asn Met Gly Val Phe  
 100 105 110

Asp Pro Thr Glu Ile His Asn Arg Gly Gln Leu Lys Ser His Met Lys  
 115 120 125

Glu Ala Met Ile Lys Leu Gly Phe His Leu Leu Cys Phe Phe Met Tyr  
 130 135 140

Leu Tyr Ser Met Ile Leu Ala Leu Ile Asn Asp  
 145 150 155

<210> 363

<211> 70

<212> PRT

<213> Homo sapiens

<400> 363

Ala Arg Ala Pro Ala Pro Ser Leu Pro Pro Leu Pro Ser Pro Ala Pro  
 1 5 10 15

Ala Leu Ala Pro Ala His Ser Leu Leu Gly Leu Leu Leu Gly Arg Met  
 20 25 30

Ser Gly Ser Ser Leu Pro Ser Ala Leu Ala Leu Ser Leu Leu Val  
 35 40 45

Ser Gly Ser Leu Leu Pro Gly Pro Gly Ala Ala Gln Asn Val Arg Val  
 50 55 60

Gln Ser Gly Gln Asp Gln  
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<210> 364

<211> 56

<212> PRT

<213> Homo sapiens

<400> 364

Gly Thr Ser Lys Asp Cys Val Leu Tyr Ala Phe Leu Asp Pro Gly Met  
 1 5 10 15

Ala Val Pro Leu Phe Leu Tyr Ile Phe Thr Leu Leu Pro Leu Leu Pro  
 20 25 30

Phe Leu Leu Ser Leu Cys Phe Ser Pro Leu Thr Val Lys Arg Ser Ser  
 35 40 45

Ser Ser Glu Ser Lys Ser Ser Leu  
 50 55

Applicant's or agent's file reference number	PZ031PCT	International application	Unassigned
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

REC'D 18 AUG 1999

A. The indications made below relate to the microorganism referred to in the description on page <u>260</u> line <u>N/A</u>		WIPO	PCT
B. IDENTIFICATION OF DEPOSIT		Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection			
Address of depositary institution (including postal code and country)  10801 University Boulevard Manassas, Virginia 20110-2209 United States of America			
Date of deposit  July 27, 1998		Accession Number  203069	
C. ADDITIONAL INDICATIONS (leave blank if not applicable)		This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)			
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28(4) EPC).			
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)			
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")			

For receiving Office use only
<input checked="" type="checkbox"/> This sheet was received with the international application
Authorized officer Yvette E. Simms PCT International Division

For International Bureau use only
<input checked="" type="checkbox"/> This sheet was received by the International Bureau on:  18 AUGUST 1999
Authorized officer P. Gonsky

**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PZ031PCT	International application:	Unassigned
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>243</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country)  10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit  June 11, 1998	Accession Number  209965
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28(4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

For receiving Office use only	For International Bureau use only
<input checked="" type="checkbox"/> This sheet was received with the international application	<input type="checkbox"/> This sheet was received by the International Bureau on:
Authorized officer  Yves Z. S. S. S. S. PCT International Division	Authorized officer

**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

**NETHERLANDS**

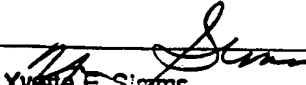
The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.



Applicant's or agent's file reference number	PZ031PCT	International application	Unassigned
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>249</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT <span style="float: right;">Further deposits are identified on an additional sheet <input type="checkbox"/></span>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country)  10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit  June 26, 1998	Accession Number  203027
C. ADDITIONAL INDICATIONS (leave blank if not applicable) <span style="float: right;">This information is continued on an additional sheet <input type="checkbox"/></span>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28(4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	
For receiving Office use only	For International Bureau use only
<input checked="" type="checkbox"/> This sheet was received with the international application	<input type="checkbox"/> This sheet was received by the International Bureau on:
Authorized officer  Yvette E. Storms PCT International Division	Authorized officer

Form PCT/RO/134 (July 1992)

**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PZ031PCT	International application	Unassigned
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>253</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country)  10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit  July 27, 1998	Accession Number  203071
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28(4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	
For receiving Office use only <input checked="" type="checkbox"/> This sheet was received with the international application  Authorized officer  Yvonne E. Skimms PCT International Division	For International Bureau use only <input type="checkbox"/> This sheet was received by the International Bureau on:  Authorized officer

Form PCT/RO/134 (July 1992)

**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by an applicant in the individual case.

**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PZ031PCT	International application
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>259</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT <span style="float: right;">Further deposits are identified on an additional sheet <input type="checkbox"/></span>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country)  10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit  July 27, 1998	Accession Number  203070
C. ADDITIONAL INDICATIONS (leave blank if not applicable) <span style="float: right;">This information is continued on an additional sheet <input type="checkbox"/></span>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28(4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

For receiving Office use only
<input checked="" type="checkbox"/> This sheet was received with the international application
Authorized officer <i>Yvette E. Simms</i> PCT International Division

For International Bureau use only
<input type="checkbox"/> This sheet was received by the International Bureau on:
Authorized officer

**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

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**DENMARK**

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**SWEDEN**

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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US99/17130**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(6) : Please See Extra Sheet.

US CL : Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 536/23.1, 23.5; 435/69.1, 320.1, 252.3, 325, 6, 7.1; 530/350, 300, 387.1; 514/2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS, DIALOG - Biotech Files

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JACOBS, K. A. et al. A Genetic Selection For Isolating cDNAs Encoding Secreted Proteins. Gene. 1997, Vol. 198, pages 289-296, see entire document.	1-23

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*B* earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*A* document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means	
*P* document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

05 OCTOBER 1999

Date of mailing of the international search report

21 OCT 1999

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

ELIZABETH C. KEMMERER

Telephone No. (703) 308-0196

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US99/17130

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☒ Claims Nos.: 1-23  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  
  
Please See Extra Sheet.
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US99/17130

A. CLASSIFICATION OF SUBJECT MATTER:  
IPC (6):

C12N 1/21, 5/10, 15/11, 15/12, 15/63; A61K 38/16, 38/17; C07K 14/00, 14/435, 16/00; G01N 33/50

A. CLASSIFICATION OF SUBJECT MATTER:  
US CL :

536/23.1, 23.5; 435/69.1, 320.1, 252.3, 325, 6, 7.1; 530/350, 300, 387.1; 514/2

BOX I. OBSERVATIONS WHERE CLAIMS WERE FOUND UNSEARCHABLE

2. Where no meaningful search could be carried out, specifically:

All of the claims were unsearchable to the extent that they require reference to sequences from the sequence listing or an ATCC deposit. However, the specific sequence and deposit numbers were replaced in the claims with generic designators X, Y and Z. Therefore, no meaningful search of the sequences or deposits per se can be carried out by this Authority. The subject matter of the claims has been searched only to the extent possible with reference to the balance of the description.